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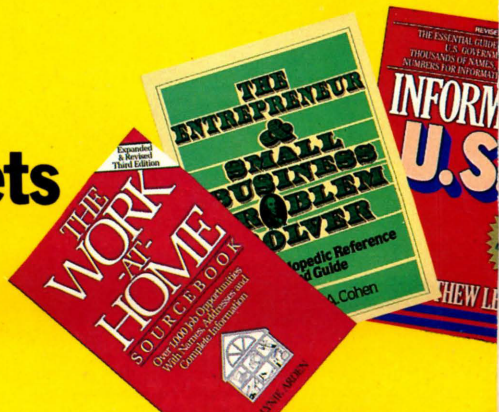

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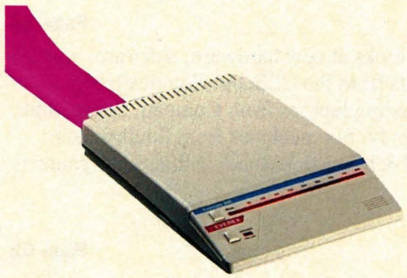
VOLUME 8
NUMBER 9

SEPTEMBER
1990



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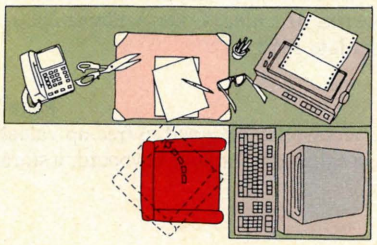

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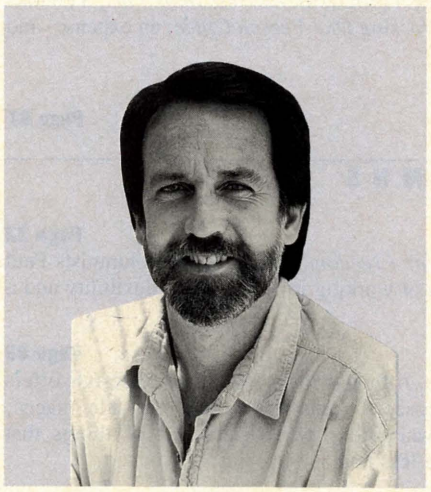

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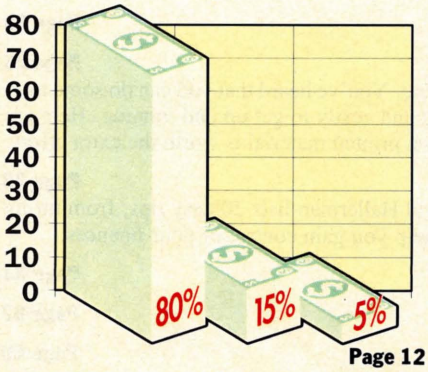

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FEATURES

ANNIVERSARY ISSUE

COVER STORY **Page 37**

Striving to be the best: That's what entrepreneurial spirit is all about. In this special anniversary issue, the editors of HOME-OFFICE COMPUTING have assembled the best business advice, equipment information, and resources available to the home-based professional—information to help you achieve your business goals.

The Best Business Opportunities for the 1990s **Page 38**

The coming decade promises to be an important one for homeworkers and small-business owners. What are the hot opportunities and markets? How can today's computer-savvy entrepreneurs tap into major domestic and global trends to ensure business success?

The Best Home-Office Design Tips **Page 42**

There's no doubt that you'll work better and more productively if your home office is properly designed—designed for you and the way you like to work. Here's some essential advice for turning your spare-room operation into a work space to be envied.

The Best Ways to Keep Clients Coming Back **Page 47**

For almost any company, repeat business is one of the most crucial foundations for success. The tips and techniques here will help keep your clients coming back.

The Best Ways to Squeeze More Out of Your MS-DOS Computer **Page 50**

It's probably easier and cheaper than you think to wring the most out of an old workhorse computer. These 25 ideas on upgrading and power-boosting, most under $200, can give your system a real performance edge.

The Best Business Resources **Page 55**

A compendium of associations, electronic networks, business-to-business services, government agencies, specialty publications, and other resources for home-based professionals.

SURVEY RESULTS

1990 Reader Survey Results **Page 12**

The results are in from our annual survey, and they paint an interesting picture of our readers. Check here to find out more about who they are, what they're doing, and how they're doing it. You'll want to see how you fit in.

SPECIAL CONTEST

The First Annual Best Home-Business Contest **Page 18**

Does your business have the right stuff? The search is on for the best home-based businesses. Enter this one-of-a-kind contest and you could be one of the winners who will cash in on more than $20,000 in prizes.

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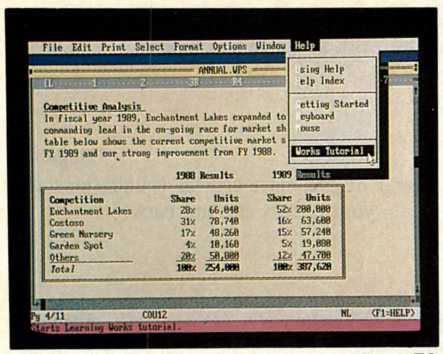

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ADVISORY BOARD

Mark Alvarez, author, The Home Office Book*; Michelle Corbin Hillman, public-relations consultant, Corbin and Company; Paul and Sarah Edwards, authors and sysops of CompuServe's Work-at-Home Forum; Dr. Daniel Lorenzetti, management and technology consultant, Acumen, Inc.; Peter Miller, author and business-development consultant; Tom Miller, director, ESU Telework Group (a division of Link Resources); Tom Morton, certified public accountant; Wesley J. Smith, attorney and consumer activist.*

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PRODUCTS

Product Previews **Page 22**

HOME-OFFICE COMPUTING's editors take first looks at new hardware, software, and office products. *This month:* Hot news and products from the CES and Comdex trade shows and from other product introductions—including laptops from Compaq, Sharp, and Texas Instruments; a new home computer from Tandy; fax machines from Southwestern Bell and PhoneMate; caller-I.D. products from AT&T and Bell South; enhanced organizers from Sharp and Casio; and more.

Hardware Reviews **Page 62**

The Best Hardware Deals: A special roundup of outstanding product bargains compiled by HOME-OFFICE COMPUTING's technical staff. *Laptop Computers:* Toshiba T1000SE, NEC UltraLite, Compaq LTE/286 Model 20. *Laser Printers:* OkiLaser 400, Epson EPL-6000, Hewlett-Packard LaserJet III. *Fax Machines:* Panasonic KX-F80, Ricoh RF 920, Toshiba 3600. *Dot-Matrix Printer:* Citizen GSX-140. *Monitor:* Zenith ZCM-1492. *Two-Line Telephone:* Southwestern Bell FD 8100. *Answering Machine:* Code-A-Phone 2880. *Cordless Phone/Answering Machine Device:* PhoneMate 1850.

Office Essentials **Page 70**

The Best Space-Savers: A special look at office accessories designed to free up valuable desk space. *This month:* A mouse pad for your lap, a calculator for your keyboard, a storage cabinet on wheels, and more.

Software Reviews **Page 72**

Good Software at a Good Price: Reviews of low-cost, productivity-boosting software—including *Microsoft Works*, an all-in-one integrated package; *The UnSpreadsheet* and *As-Easy-As*, two alternatives to expensive spreadsheet programs; *Address Book Plus*, a contact and mailing-list management tool; and *Better Working One-Person Office*, an expense- and payment-tracking program.

Best-Selling Software **Page 81**

COLUMNS

Working Smarter **Page 32**

The Best Thing About Working on Your Own? Freedom! According to columnists Paul and Sarah Edwards, the most valuable benefits of working from home are flexibility and a profound sense of freedom.

Workstyles **Page 88**

The Worst Things About Working from Home. Although the work-at-home lifestyle offers a multitude of pluses, it's not always a bed of roses. To counterpoint the fairy-tale images, our telecommuting senior editor Nick Sullivan rattles off a quick list of things that sometimes make his home-based reality a little less than spectacular.

DEPARTMENTS

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Letters **Page 10**

Desktop Publishing **Page 26**

The Best Reasons to Tackle Desktop Publishing. You've heard that you can do some nifty things with DTP, but it can be time-consuming and costly to get up and running. Here are four real-world reasons that publishing your own printed material is worth the extra effort.

Finance **Page 28**

My 20 Best Money Hints. Senior editor David Hallerman lists 20 easy tips, from hiring your spouse to checking up on your bank, to help you gain control of your finances.

Home-Office Shopper/Classifieds **Page 83**

Editorial Product Index **Page 87**

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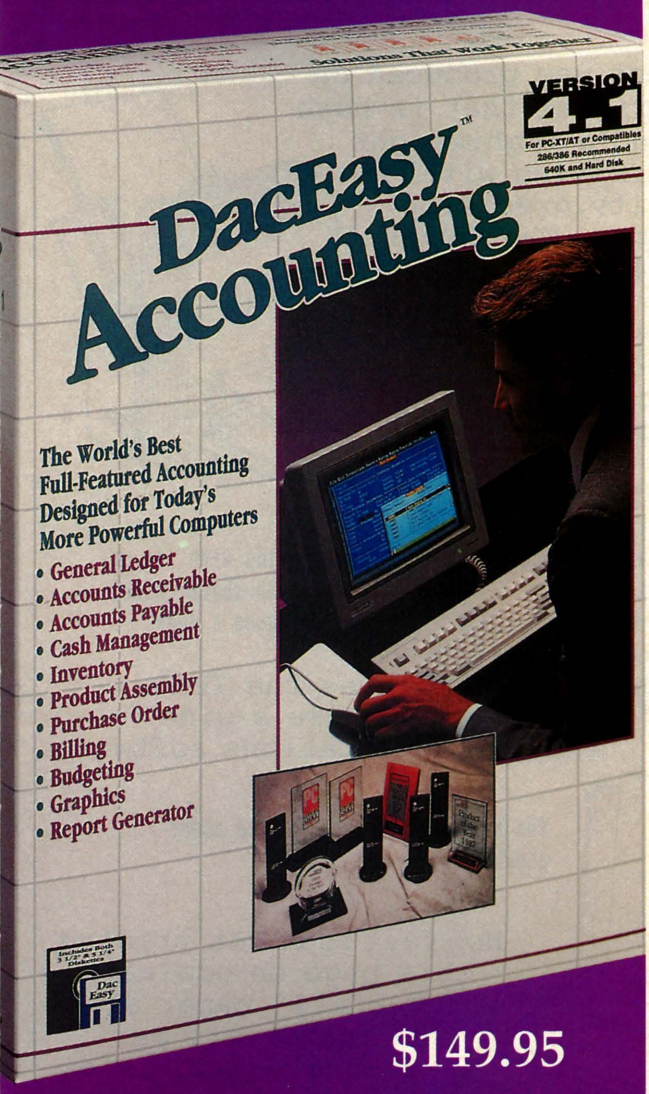

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- PC Magazine, April 10, 1990

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- InfoWorld, March 5, 1990

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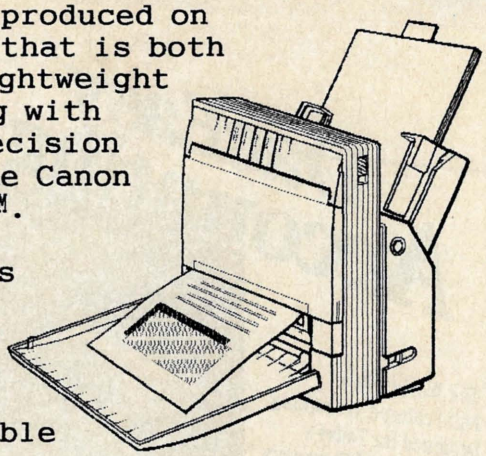
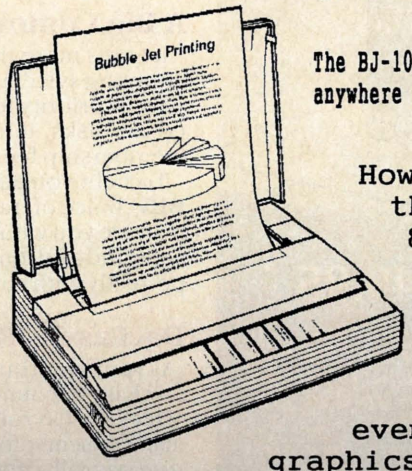
CIRCLE READER SERVICE 35

This document was produced on the first printer that is both a desktop and a lightweight portable, printing with letter quality precision on plain paper. The Canon BJ-10e Bubble Jet ™.



The BJ-10e with its optional 30-sheet feeder printing on a desk.

On a desk, with its optional 30-sheet paper feeder, it's an ideal personal printer. As a single-sheet portable with its optional rechargeable battery pack, it weighs a remarkable 4.6 pounds and prints on a variety of paper. The BJ-10e emulates the IBM® Proprinter™ X24E, so you can use a wide range of applications software.



The BJ-10e printing a single sheet anywhere you want.

How fast is it? It printed this page on ordinary 8 1/2"x11" paper at 83 characters per second. It won't slow down when printing in **bold** or various type sizes either. It even handles complicated graphics, as you see in these scanned-in BJ-10e illustrations.

What's more, its blacks are intensely black and its ink dries instantly, so it never smears.

Another page in printer history.

How quiet is it? Quiet enough to be used in the middle of the night with someone asleep a few feet away.

And, you never have to worry about maintenance because it uses a pop-in BJ cartridge which contains the print head and the ink supply. Every cartridge prints approximately 700,000 characters (HQ mode), making it as economical to use as it is to buy.

But best of all, the BJ-10e works everywhere you could possibly need it, fitting neatly into a briefcase with its optional rechargeable battery pack.

The Canon BJ-10e Bubble Jet. What other printers print on a desk, it prints anywhere.

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CIRCLE READER SERVICE 31

Taking a Chance on a Moving Target

Somewhere along the line I became self-conscious about using superlatives. Today, an automatic editor in my brain sets off an alarm at each "most," "best," and every other "-est" that slips out of my mouth or onto a page.

Warring with my cautious side, however, is the daring, risk-taking, zealous part of my nature that urges me to voice strong opinions, take a stand, say what I mean. I'd hate to be like the guy in one of my favorite *New Yorker* cartoons who confesses to the police that he killed his boss by yessing him to death.

These two sides of me debated about providing readers with an issue that gives you what you most want from us—our opinions, advice, choices of what to buy, and answers to every imaginable question related to running an independent business. My cautious side wondered what we would do if, after we went to press with our public "bests," a rash of "betters" came along.

At editorial meeting after editorial meeting, our staff batted the "best ball" back and forth, pulling the idea one way and pushing it another. Some of us loved it at once, while others danced around it, wary of getting too close.

The deciding factor came when we discussed what special service we could deliver to you for this year's anniversary issue. We were looking for a big topic, one that would be the backbone of an issue you would find indispensable. This had to be an issue that would be even more useful than all the others that came before it.

Important. Gutsy. A desktop companion. Something to save and turn to again and again. These are some of the things we wanted this September issue to be. The focus of the issue came in a flash. We had to say it—in print. This is an issue that tells you what we think is best.

As you turn the pages of this issue you'll note that we, like our readers, retain a certain degree of individuality. How could the editors of a magazine communicate effectively to independents like you if we conformed completely to the rules? So, sprinkled among all the bests, you'll find the occasional piece whose editor would go only so far as to label something "good," avoiding "best" at any price. And Nick Sullivan, our long-distance editor, sent his own list of worsts to close the issue. What could be better?

My own best advice to those of you who read this note is not to miss the chance to enter our "First Annual Best Home-Business Contest." If you've made your best idea for your own business come to life, take the time to tell us about it. You took a chance on your business, so why miss the chance to win some prizes?

CLAUDIA COHL
EDITOR-IN-CHIEF

Home Office COMPUTING

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730 Broadway, New York, NY 10003
(212) 505-3580
EDITOR-IN-CHIEF: Claudia Cohl
DESIGN DIRECTOR: Vincent Ceci

EDITORIAL
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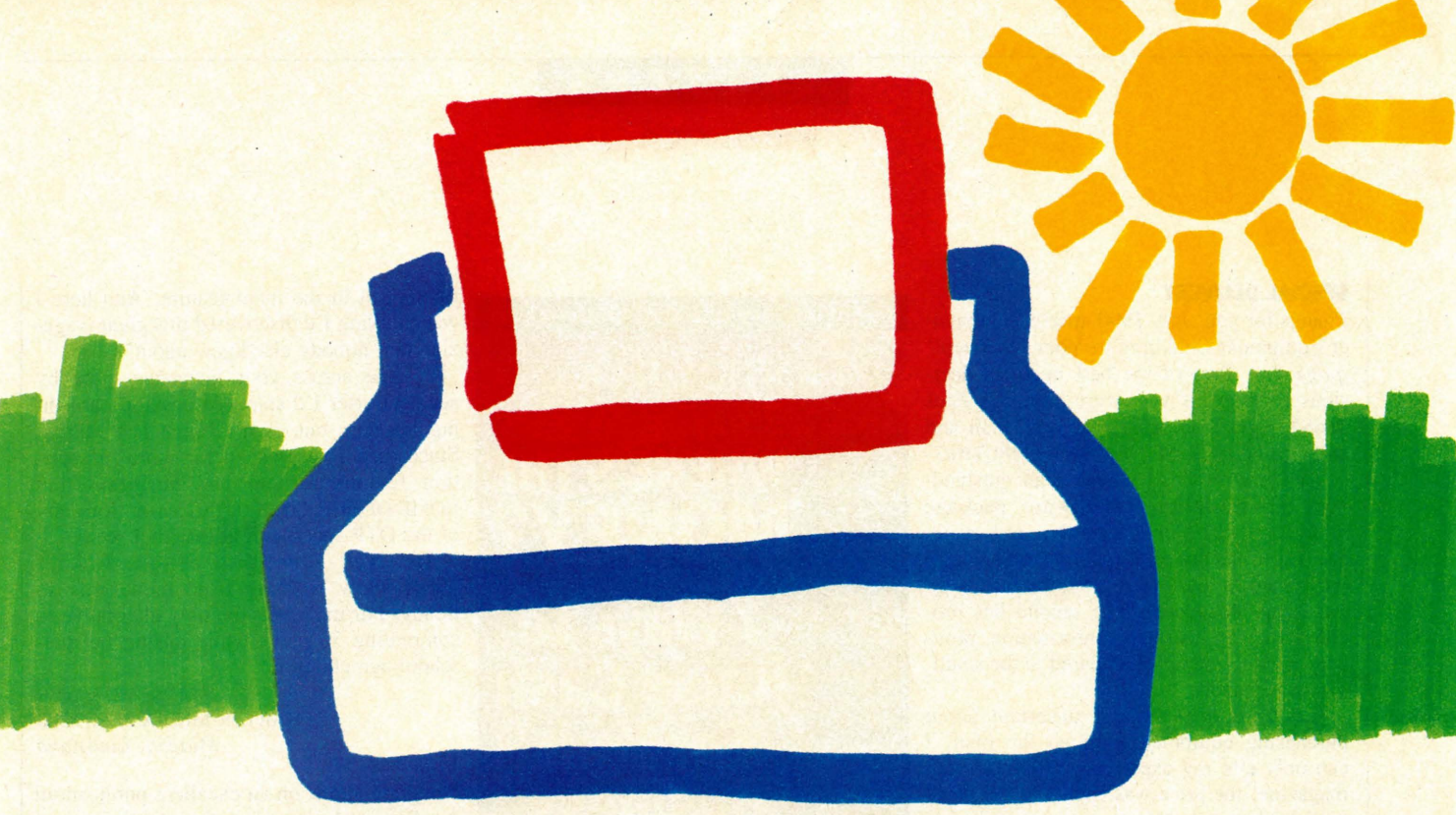

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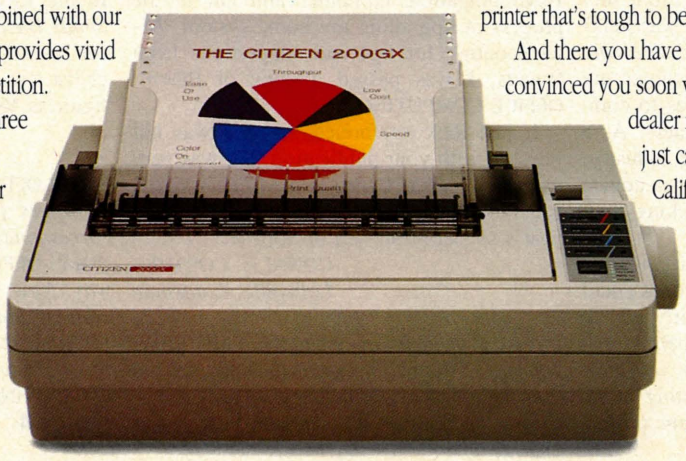

As you've come to expect from Citizen, paper handling is exceptional; with convertible push/pull tractor, bottom feed, paper parking and continuous paper tear-off features.

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CIRCLE READER SERVICE 32

SPECIAL DELIVERY

Thanks for your July 1990 article "Computer Equipment Delivered to Your Doorstep" (*page 47*). Two of the best business decisions I made this year were buying a Zeos 386SX-based computer system by mail and subscribing to HOME-OFFICE COMPUTING.

The first provided me with an outstanding, custom-tailored hardware package backed by excellent, friendly, and easily accessible technical support (including a long Sunday session as I bumbled through the setup procedure). The second has provided me with invaluable information, product reviews, and articles geared to the small-business person.

For those readers still uncertain about purchasing equipment through the mail, I can only cite my experience. As with your magazine, the price was right and the product is unimpeachable.

JENNIFER SINGER
PRESIDENT, CRYSTAL COMMUNICATIONS
Bel Air, Maryland

MEMORY ERROR

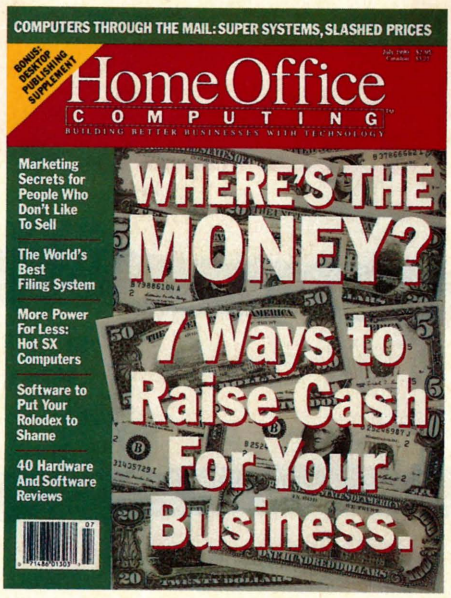
I enjoyed Linda Stern's article, "How to Stay in Touch with Absolutely Everybody" in the July 1990 issue (*page 42*). However, readers may be left with the impression that *Memory Mate* is a memory-resident-only package. Wayne Stoler's reservations about using the program, in fact, are based on the false assumption that the program *must* be run from memory. While it is true that *Memory Mate* can be run as a memory-resident program, its default operation is from disk. A switch added to the command is required to run the software from memory.

PHILIP K. JASON
Potomac, Maryland

GETTING ON TAPE

The short piece in your July Up Front section on audiotape sales brochures was interesting (*"A Cassette May Be the Ultimate Brochure" page 14*). Audio brochures are an excellent method for businesses to communicate with prospective customers. As a 20-year veteran of the recording industry, however, let me offer some further advice before people out there start clicking their home cassette decks on "record."

Although only fractionally as difficult and costly as video production, audio does entail up-front costs that can significantly add to the per-unit total. Duplication, labeling, and vocal talent aren't the only things you have to worry about. Design and printing of labels and packaging require the same professional look and production steps of any printed marketing item. Production costs like master tape, duplicating master, scripting, rehearsal, script editing, and other on-the-clock fees can add up quickly, too.



What can look attractive as a $1.50-a-shot promotion piece can end up costing more like $4 or $5 once you factor in all the things necessary to make the tape stand out and get the right person to listen to it.

TOIVO MAKI
INTERMEDIA COMMUNICATIONS & ENTERTAINMENT SUPPORT SERVICES
Riverside, California

RAVE REVIEWS

I can think of no better way to begin this letter than "Where have you been all my life?" Although I work in the legal field, I work at home part of the time. I own an IBM-compatible computer and am in the process of upgrading my home system. After scouting for tips and suggestions from friends, I was passed a copy of HOME-OFFICE COMPUTING.

It just took my breath away. I was not familiar with your publication, but was very excited by what I read in just one issue. I can only imagine what my newly ordered year's subscription will do for me.

CONNI G. CORMIER
Lafayette, Louisiana

I read a special report in the *Wall Street Journal* at the beginning of the summer and was delighted to see that my favorite publication, HOME-OFFICE COMPUTING, was referenced in the main feature. And here I was thinking I'd discovered this great magazine that nobody else knew about!

I came across your magazine quite by accident after I'd started a desktop-publishing business out of my home last March. Since then I've gleaned far more information for my system and business from HOME-OFFICE COMPUTING than from any of the DTP-specific publications I read.

The *Wall Street Journal*—gee whiz, I didn't know working from home was so trendy. For me it was the only alternative to commuting 30 miles while raising my preschool-age children.

ANDREA HARTER
HARTER MEDIA SERVICES
Minden, Louisiana

Congratulations on an excellent publication! I enjoy nearly every article in each issue of HOME-OFFICE COMPUTING and feel that it has given me invaluable, real-world, usable advice. Your business advice, in particular, is much more down-to-earth than what I get from magazines written for big businesses. Thank you for consistently providing to-the-point, easily understood, and immediately applicable information.

ANNE RENAULT
XL WORD PROCESSING SERVICES
Toronto, Ontario, Canada

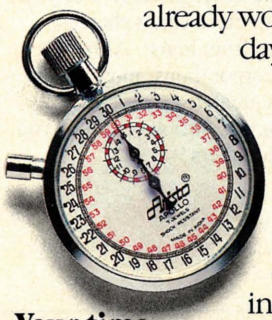
CORRECTIONS/UPDATES

The review of the Murata 1800 fax machine in the June 1990 issue (*"Superb Fax; Shabby Manual," page 64*) contained information about an undocumented "extra plastic part" of the unit that caused problems for our reviewer. In fact, the plastic part was a piece of the fax machine that had snapped off during shipping. We regret any confusion caused by this oversight.

In the July ShopTalk column (*"Targeting Small Business," page 18*), the rental rate for HOME-OFFICE COMPUTING's subscriber list was incorrectly reported. The correct figure is $85 per 1,000 subscriber names.

HOME-OFFICE COMPUTING *looks forward to letters from all readers. Please direct correspondence to Letters to the Editor,* HOME-OFFICE COMPUTING, *730 Broadway, New York, NY 10003. Include name, address, and telephone number. We cannot respond to every letter we receive, and those letters included in* HOME-OFFICE COMPUTING *may be edited for length and clarity.* ■

Preserve your three most precious resources.



Your time.

Chances are, you're already working 26-hour days.

So if you want to be more productive, you'll have to find a way to do more work in less time.

Which is exactly what RapidFile,® the easy-to-use file manager from Ashton-Tate, can help you do.

If you're already familiar with Ashton-Tate's dBASE® products or Lotus 1-2-3, learning to use RapidFile is a snap because of its compatibility and similarity to these world standards.

Like the dBASE products, RapidFile gives you the option of using pull-down menus. It has easy import/export capabilities. And it can directly read dBASE files*, providing a natural growth path to dBASE software.

RapidFile also gives you the option of horizontal menus similar to Lotus 1-2-3. And it allows you to view and edit data in a table view like Lotus 1-2-3.

RapidFile makes it easy to perform even the most tedious jobs without programming.

With RapidFile's reporting function, you can design your own customized reports with the information in your data file, including automatic calculations.

RapidFile also includes a built-in word processor that allows you to prepare personalized letters, memos and other documents without ever leaving the program. It can even address your labels or envelopes.

Your effort.

RapidFile combines data management, word processing and report writing.

That, alone, saves you a lot of money.

However, if you act now, you can save even more money.

During this special, limited-time promotion, you can purchase RapidFile for just $149.95. A savings of over $145 off the suggested retail price. And all you have to do is place your order by September 30, 1990.

To order, send us the coupon below. You may call our toll-free number: **1-800-2ASHTON (227-4866)** Dept. R97, for credit card orders. Or see your local Ashton-Tate Authorized Dealer.

Your money.

Hurry. The sooner you order RapidFile, the sooner you can start enjoying the savings. In time. Effort. *And* money.

Save over $145! RapidFile's Special Limited Time Offer.

☐ YES, I want to take advantage of this special offer to purchase RapidFile® for just $149.95. Offer may change at any time without notice. Order must be received by September 30, 1990. Offer good in U.S. only.

Name _____

Company _____

Mailing Address _____

City _____ State _____ ZIP _____

Daytime Phone ( ) _____

Check size: ☐ 5 ¼" disk ☐ 3 ½" disk

Preferred payment method (check one):

☐ Check enclosed. No purchase orders or COD's please. Please include applicable sales tax plus $4 shipping ($11 in Alaska and Hawaii, $11.50 in Puerto Rico). Make payable to Ashton-Tate Corporation.

☐ VISA ☐ MasterCard ☐ American Express/Optima

Card No.: _____

Exp. date: _____

Signature: _____

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PHONE ORDERS: 1-800-2ASHTON (227-4866).

Ashton-Tate®

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ANNUAL READER SURVEY RESULTS

Our Yearly Look at Who You Are, What You're Doing, and Why You're Doing It

Response to our annual reader survey, which ran in the June 1990 issue of HOME-OFFICE COMPUTING, was once again overwhelming. Stacks of mail flooded our offices during the summer—mail from you, about you.

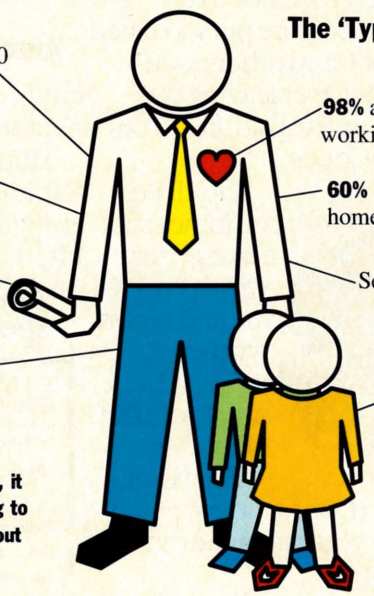
As editors of a magazine that serves a pretty diverse audience, we thought that the responses—more than 2,000 of them—would help us get a picture of a typical home worker. Of course, what we found could hardly be defined as typical, but there are common trends shared by home-based and small-business people alike.

First of all, you are an educated lot, with most of you holding undergraduate degrees and many of you holding postgraduate degrees. You fall into three basic, evenly divided categories of home-working—about one-third of you operate a full-time home-based business, one-third run a part-time operation, and one-third do a substantial amount of your work at home, either by taking it home after hours or by telecommuting.

A big concern of yours is technology that will help your business. You want to know about both the current, state-of-the-art products as well as the old standbys you need to do your work. You're planning to buy more hardware, software, and office products this year, and you're seeking reliable information to make smart choices.

But, most of all, you're happy working from home. Although you miss some things about working in corporations, most of you are making more money and achieving a greater sense of satisfaction in your current working situation. In fact, just about all of you would recommend working from home to others.

The 'Typical' Home Worker



Average age is 40

75% are married

85% attended college

97% would recommend working from home to others

98% are happier working from home

60% have been working at home less than 10 years

Sex: **62%** male
38% female

70% have children

With a high percentage of readers reporting a generally satisfied outlook, it appears that working at home is going to continue to rise in popularity throughout the coming decade.

Of Those Who Run a Business . . .

67% operate their business as a sole proprietorship.
75% operate service-based businesses.
55% would like to expand their businesses in the near future.
64% earn more than or about the same as they did in corporations.

How Are You Working?

28% I run a full-time home-based business.
6% I run a full-time business that is not home-based.
29% Part-time home-based business or freelance.
21% I work at home after hours.
4% I work at home at least one day a week.
6% Don't run a business but want to start one.
6% Other

There are many ways to effectively work at home, from running a business to telecommuting.

THE INSTANT BUSINESS SERIES™

Get Busy.

Hundreds of letters, agreements, and forms for the home office, plus designer fonts and a point-and-click menuing system, all for only $64.95!

The Instant Business Series... a professional word processor plus all the essential business tools you'll need to operate a successful business. All in one complete package! In just minutes you'll have access to hundreds of formats for letters, agreements, and forms. Design professional-looking reports. And operate under a new menuing system that makes using your computer as easy as point and click. And because all are compatible with each other, you can cut and paste sections from one to the other. It's a complete family of powerful tools for one low price.

Instant Business Letters...

presents a collection of over 200 formats for virtually all types of business letters, agreements, and forms. The new, easy menuing system makes writing letters as easy as point and click.

Instant Business Agreements...

provides 50 ready-to-use contracts on disk. Includes agreements for real estate, employee agreements, credit, services performed, non-disclosure, leasing, and much more.

Instant Business Forms...

lets you design your own forms or use existing forms from the disk library. Includes purchase orders, invoices, shipping and personnel forms, graphs, and much more.

Instant Fonts...

lets you design professional documents with 25 different type styles. Or design your own font with the full-powered font editor.

Instant Menu Manager...

complete menus help you take charge of your disk drive! Load, Delete, and Rename programs automatically. It's that easy!

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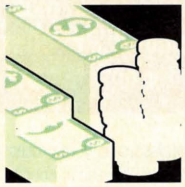
CIRCLE READER SERVICE 38

The Top 10 Home-Based Businesses

1. Consultancies



4. Financial services

2. Business services

5. Writing

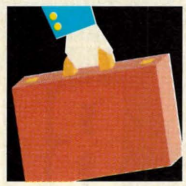
3. Computer services

6. Graphic, visual, and fine arts

7. Independent sales

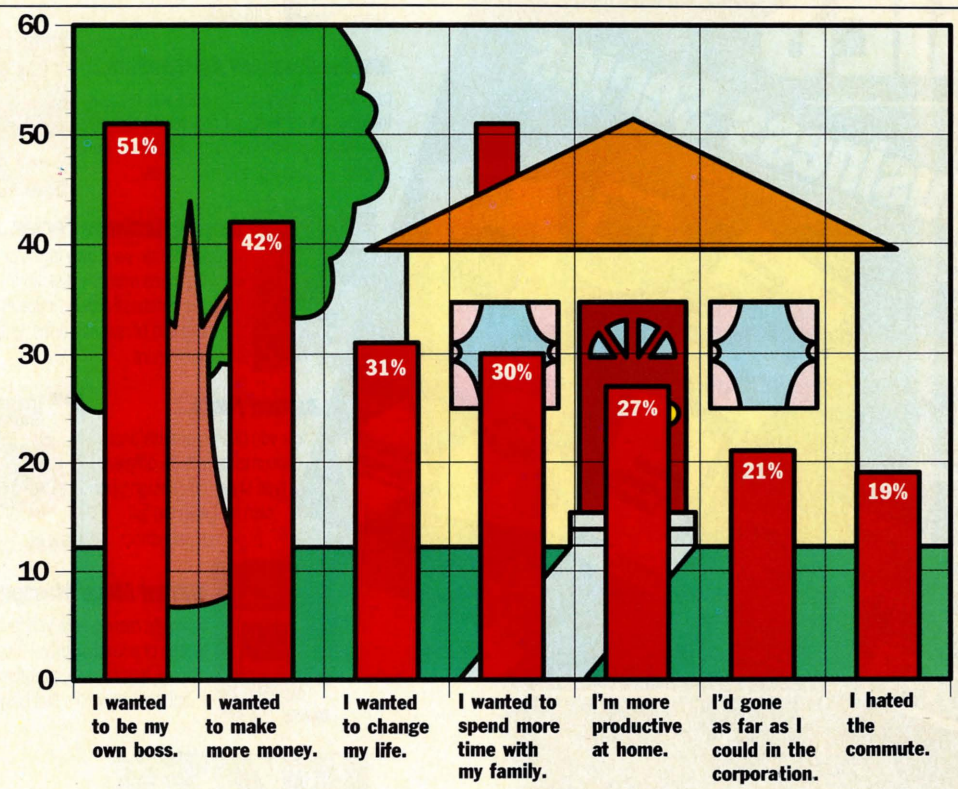
8. Medical services

9. Construction and repair services



10. Marketing and advertising firms

The kind of work you can do at home is limited only by your expertise and enthusiasm. With the aid of technology, many jobs that could not have been performed outside of a traditional office five years ago can now be home-based.



Why Did You Decide to Work at Home?

Motivating factors for choosing to work at home cover a full spectrum: from purely financial benefits to the desire to enhance the quality of one's life.

SURVEY WINNERS

We picked a grand-prize winner and 20 runners-up in a random drawing of all survey respondents. Jaime Gruger, a home-based insurance and property-management consultant from Federal Way, Washington, will receive a new Murata M1800 fax machine.

The following people will each receive a free 20-pack of Fuji floppy disks: Barbara Smith, Richfield, Minnesota; Richard Fortier, Elbert, Colorado; Carol Taylor, Chicago, Illinois; Dennis Shelton, Edmond, Oklahoma; James Naylor, Amarillo, Texas; Pamela Hines, Conyers, Georgia; Bruce Krieg, Olympia, Washington; Elizabeth Blake, San Diego, California; Jeff Lynch, Los Angeles, California; Stephen Meade, Tustin, California; Jim Steelman, Woodstock, Georgia; Eric Edwards, Las Vegas, Nevada; Gloria Hajduk, Los Angeles, California; Moira Caruso, Roselle, New Jersey; Kalily Campos-Eisen, Chicago, Illinois; Dolores Allnock, Waldorf, Maryland; Victoria Birkett, Annapolis, Maryland; M.A. Schwartz, Potomac, Maryland; Deborah Sanders, Berkeley, California; and Bruce Brocka, Davenport, Iowa.

Congratulations to all of our winners.

New! Version 1.2

Publish It!

HOME OFFICE COMPUTING 1989 EDITORS' PICK

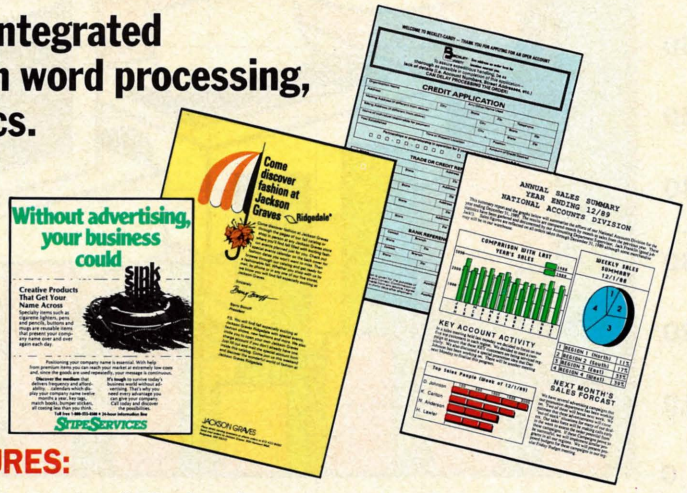
INFO WORLD BEST IN ITS CLASS Jun. 18, 1990

Chosen as BEST BUY PC WORLD

PC MAGAZINE EDITOR'S CHOICE

in less than an hour.

PUBLISH IT!—A full-featured, fully integrated desktop publishing powerhouse with word processing, page layout, typesetting and graphics.



For all its state-of-the-art ability, *PUBLISH IT!* is incredibly easy to learn—refreshingly so. *PUBLISH IT!* combines the familiar GEM User Interface, our Quick-Start Mini-Manual, a full complement of Help Screens, and the practical ***WYSIWYG (What-You-See-Is-What-You-Get)*** display—all designed to get you up and running in less than one hour!

SPECIAL FEATURES:

- **Flexible Page Layout:** With your mouse or keyboard, you can overlap, reposition, resize, & reshape the text, columns, graphics.
- **More Typefaces and Sizes:** Choose from over 1350 possible type-style combinations! Opt for bold, italic, underlined, light, white, & superscript or subscript characters. Type sizes range from 7 to 72 point.
- **Premium Quality Printouts:** *PUBLISH IT!* uses a high density printout format that gives you superior quality printouts on your laser or dot matrix printer.
- **Built-in Word Processor:** All the features necessary for everyday word processing, plus most of the sophisticated ones found only in more expensive programs.
- **Text Importing:** Load documents from WORDPERFECT, MICROSOFT WORD, WORDSTAR, WORD WRITER PC, or from any other program with an ASCII text format directly in *PUBLISH IT!*
- **Built-in Graphic Toolbox:** Draw lines, boxes, circles, curved corners, and "free-hand" graphics. Plus, choose from a wide variety of built-in line and fill patterns.
- **Graphics Importing:** Directly import graphics from LOTUS 1-2-3, GEM DRAW, GEM GRAPH, GEM SCAN, PC PAINTBRUSH, and PUBLISHERS PAINTBRUSH. Then crop and size them to fit.
- **Automatic Text Flow and Word Wrap.**
- **Multiple Size Page Views.**
- **Kerning and Leading.**
- **Over 150 Professionally Drawn Graphics & Illustrations.**
- **Plus, you get worksheets, time-saving features, sample documents & more!**

NEW FEATURES:

- **More than 85 Professionally Designed Layouts:** DESIGN IDEAS™. You can choose from over 85 pre-designed formats. This allows you to easily create layouts for ads, brochures, newsletters & more.
- **Single Step Undo Function.**
- **More Compatibility!** Now compatible with: Hewlett-Packard Soft Fonts and DeskJet Printers, TIFF, Encapsulated PostScript and Splash! graphic formats.
- **Monospacing:** When using Typographica or Bitstream monospace fonts, you can now work in a monospacing mode.
- **Supports Downloadable PostScript fonts:** Now you can add additional PostScript fonts from sources such as Bitstream and Adobe.
- **Imports Encapsulated PostScript Graphics:** Now you can rotate your EPS graphics in 90 degree increments.
- **Extended Print to Disk Capability:** Now you can print to disk no matter what printer configuration you have.

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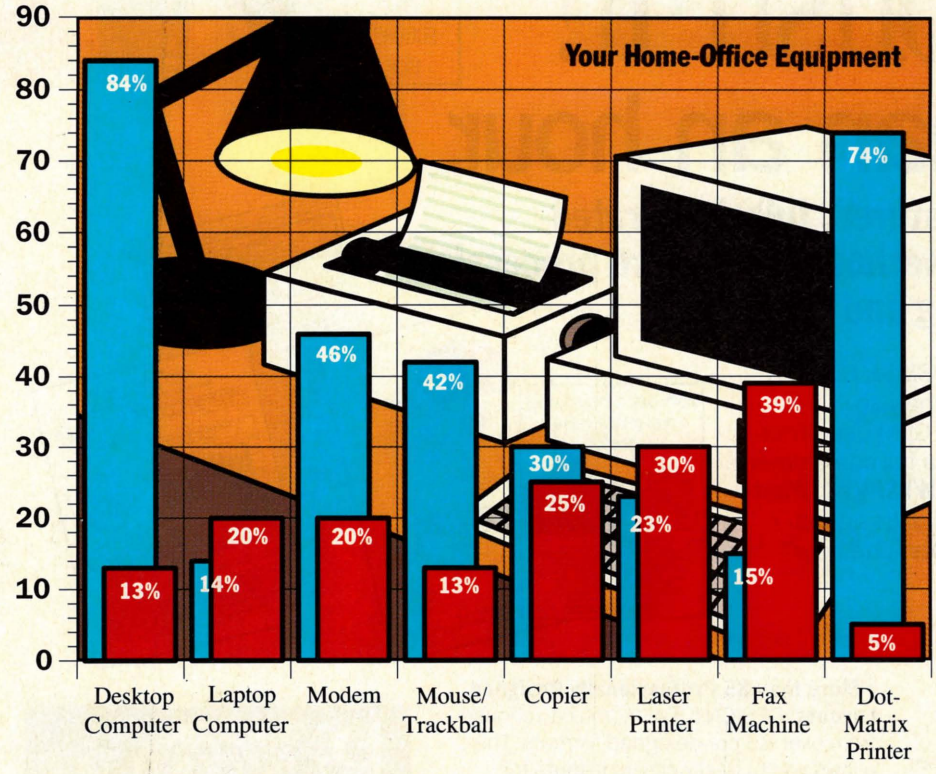
READER SURVEY



Totals spent on home-office equipment:

40% between $1,000 and $5,000
30% between $5,000 and $10,000

Plan to spend next year:

40% up to $1,000
36% between $1,000 and $5,000

Own

Plan to buy

Equipment-buying plans for the coming year show an interest both in upgrading some old workhorses and investing in some high-end technologies that are quickly becoming standards. The kind of money you plan to spend backs up this aggressive attitude toward computer and office equipment.

Top Five Software Applications to Buy Next Year

1. Desktop publishing

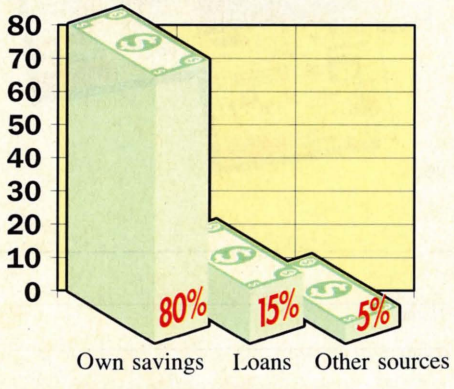
2. Accounting

3. Database

4. Business graphics

5. Personal finance

Where Did You Get the Money For Your Business?



Figures for financing home-based businesses reflect the self-reliance associated with the new breed of entrepreneurs—and may also indicate the reluctance of financial institutions to back home-based ventures.

What Do You Miss About the Corporate World?

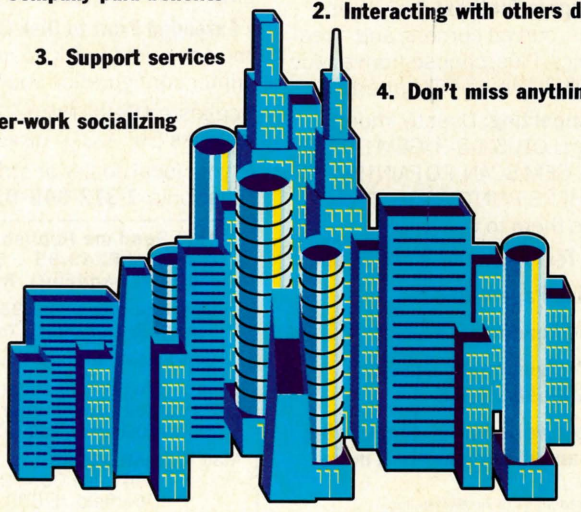
1. Company-paid benefits

2. Interacting with others daily

3. Support services

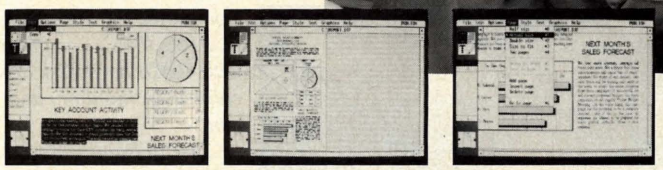
4. Don't miss anything

5. After-work socializing



HOW TO START YOUR OWN PROFITABLE DESKTOP PUBLISHING BUSINESS.

Start with at-home training that gives you hands-on design and layout experience. Training that builds the business skills and confidence you need to be your own boss. Training that even includes a powerful computer with hard drive, desktop publishing software, mouse, and printer you keep. The kind of real-world training only NRI provides.



Imagine a morning commute that's a 10-second stroll from your breakfast table to your own home office...

For more than 25 million home-based professionals, this scenario is not fantasy. What's more, experts predict the number of home workers will reach a phenomenal 40 million by the year 2000. Why?

The computer.

Being your own boss, making more money, having a flexible schedule—they're all advantages of working at home. But what's really fueling the home-based business boom is the explosion of opportunity sparked by the computer revolution. Now, with NRI's breakthrough training, you can earn top dollar as creative master of one of today's hottest computer technologies: desktop publishing.

Cash in on a multibillion dollar industry

Large corporations, small businesses, community associations, hospitals, universities, restaurants...

Just about every organization you can think of publishes something—from menus, flyers, and brochures to newsletters, catalogs, and annual reports. They're all looking for people to publish them faster and better than ever before. Now with NRI, you can cash in on this demand. You can become a professional desktop publisher, using a computer to transform words and pictures into the kind of eye-catching, results-getting publications that can earn you good money.

No design or computer experience necessary—you begin with the basics

Your NRI training begins with the basic knowledge you need to produce the kind of exciting, high-quality publications your clients expect—whether you're designing by hand with traditional tools or electronically on a computer.

Step-by-step lessons and hands-on creative projects help you first master the fundamentals of publishing: editing, design, and layout. From T-square and pica ruler to X-Acto knife and adhesives, you get all the professional graphic arts tools you need to translate designs into mechanically perfect, camera-ready paste-ups. As you master time-tested design and layout techniques, you learn how to use type, graphics, color, photos, and special effects to make all your publications their creative best. And that's only the beginning.

Powerful IBM-compatible computer system included

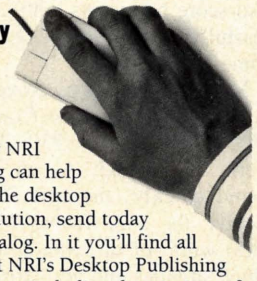
With a firm foundation in traditional design and layout, you're ready to make the leap to contemporary publishing methods using the IBM-compatible computer, desktop publishing software, mouse, and printer included in your course.

Even if you've never worked with a computer before, you'll be astonished at how easily and quickly you can apply your design skills to create visually appealing, multipage layouts and print out finished artwork—at the touch of a button. From importing documents and setting up electronic stylesheets to wrapping text and drawing freehand graphics, you learn every desktop publishing skill you need to make money producing professional-quality publications for a growing list of clients. But that's not all!

Get the business know-how you need to succeed

NRI even gives you the skills and confidence to turn your technical expertise into a successful home-based business. You get expert, practical advice on setting up the ideal home office, getting and keeping good-paying clients, marketing your services, managing your time, growing your profits, and more. Whether you want to make money running a full-time desktop publishing service, boost your current income with part-time work, or just move up to bigger and better responsibilities in your present job, NRI gives you everything you need to succeed in this revolutionary computer career field.

Send today for your FREE NRI catalog



To find out how NRI at-home training can help you cash in on the desktop publishing revolution, send today for your free catalog. In it you'll find all the details about NRI's Desktop Publishing and Design course, including descriptions of your computer system, lessons, and hands-on projects.

If the coupon is missing, write to us at NRI School of Home-Based Businesses, McGraw-Hill Continuing Education Center, 4401 Connecticut Avenue, NW, Washington, DC 20008.

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YES! Please rush me my free catalog. I'm interested in ☑ (check one only):

- ❑ **Desktop Publishing and Design**

Other NRI computer-based career courses:

- ❑ Word Processing
- ❑ Bookkeeping & Accounting
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CONTEST

First Annual Best Home-Business Contest

Be One of 60 Winners to Cash In on Over $20,000 in Great Prizes

The search is on for the best home-based business. Just tell us about yourself and you could win one of sixty prizes worth a total of more than $20,000.

Entering is easy: Just fill out a short entry form and include a profile of your business (*see below for more details*). Big profits and revenues aren't necessarily what we're looking for. We care more about your business smarts and your drive to succeed. You'll also score big points with us if you've successfully incorporated technology into your home business.

Mail your entries by November 15, 1990, to Best Home Business Contest, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003. As an incentive to respond quickly, the first 500 entrants will receive the *Fuji Home-Office Guide* and $150 worth of discount coupons for home-office supplies and accessories.

$7,500 GRAND PRIZE

CompuAdd SX Success Kit:
- *316S 386SX computer with 40MB hard-disk drive, color VGA monitor, and mouse*
- *24-Pin Panasonic printer*
- Windows *3.0*, Paint-Show Plus, PC-FullBak, *MS-DOS v4.01*, DOS Help
- *Computer paper, 10 blank disks, and a Smart Start Kit of software demos and special offers Hewlett-Packard LaserJet III printer; Intel Above Board Plus 8 memory board; Intel 387SX Math CoProcessor; Logitech ScanMan Plus handheld scanner; and a SomaShield antiglare monitor screen*

$4,000 FIRST PRIZE

Toshiba T1200XE laptop computer

$2,750 SECOND PRIZE

Ricoh RF-920 fax machine; Hayes 2400-bps modem; six-month subscription to Prodigy Service; and a SomaShield antiglare screen

$2,300 THIRD PRIZE

Fujitsu dex 150 fax machine and an Intel 2400EX modem

CONTEST

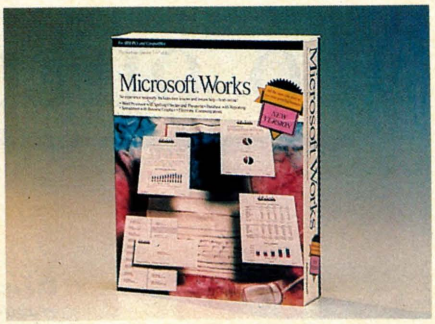
$1,200 FOURTH PRIZE

Tandy 2130 dot-matrix printer

$1,000 FIFTH PRIZE

Intel Connection CoProcessor fax board and a DFI Handy Scanner 3000 Plus

$150 SIXTH PRIZE (10 Winners)



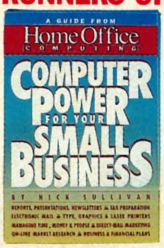
A choice of either Microsoft Works *or Microsoft* Windows

SEVENTH PRIZE (20 Winners)

A Fuji Home-Office Bonus Pack; $40 value

- *The 24-page booklet* The Fuji Home-Office Guide
- *More than $150 worth of coupons for discounts on home-office supplies and accessories*
- *20 floppy disks*

RUNNERS-UP (25 Winners)



A copy of the new book Computer Power for Your Small Business: A Guide from HOME-OFFICE COMPUTING; *$23 value*

BEST HOME BUSINESS CONTEST ENTRY FORM

HOW TO ENTER?

1. Complete the entry form and attach it to your essay.

2. Give us a profile (maximum 1,200 words) of your business, and be sure to include the following:

A. Why you started your own business at home

B. How you started and financed your business

C. An explanation of past growth and potential for future expansion

D. How you use technology to run your business

E. Your techniques for market research and publicity, and how you adapt to current market trends

F. A discussion of the advantages and drawbacks of working out of your home

G. A description of the physical layout of your home office

H. How you integrate/separate family and business affairs

I. Information about any partners or employees

J. Any supporting materials (brochures, business cards, press releases, newsletters, samples of your product) that might help your entry

CONTEST RULES

1. To qualify, your entry *must* be a computer printout of no more than 1,200 words (about five pages double-spaced).

2. Include a photo of yourself in your home office.

3. Include your address and telephone number.

4. All entries and photographs become the property of HOME-OFFICE COMPUTING. However, material will not be used in future publications and promotions without the prior consent of the entrant.

5. Scholastic Inc. employees, advisory board members, and members of their families are ineligible.

6. No cash substitutes for prizes.

DEADLINE: All entries must be postmarked by November 15, 1990.

JUDGES: All entries will be judged by HOME-OFFICE COMPUTING editors and advisers.

WINNERS: Winners will be announced in the May 1991 issue of HOME-OFFICE COMPUTING.

YOUR NAME & _____

BUSINESS TITLE: _____

ADDRESS: _____

_____ **TELEPHONE:** _____

BUSINESS NAME: _____

_____

TYPE OF BUSINESS: _____ **NO. OF YEARS IN BUSINESS:** _____

LIST THE COMPUTERS AND EQUIPMENT YOU USE: _____

_____

_____

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LIST ALL SOFTWARE AND ON-LINE SERVICES YOU USE: _____

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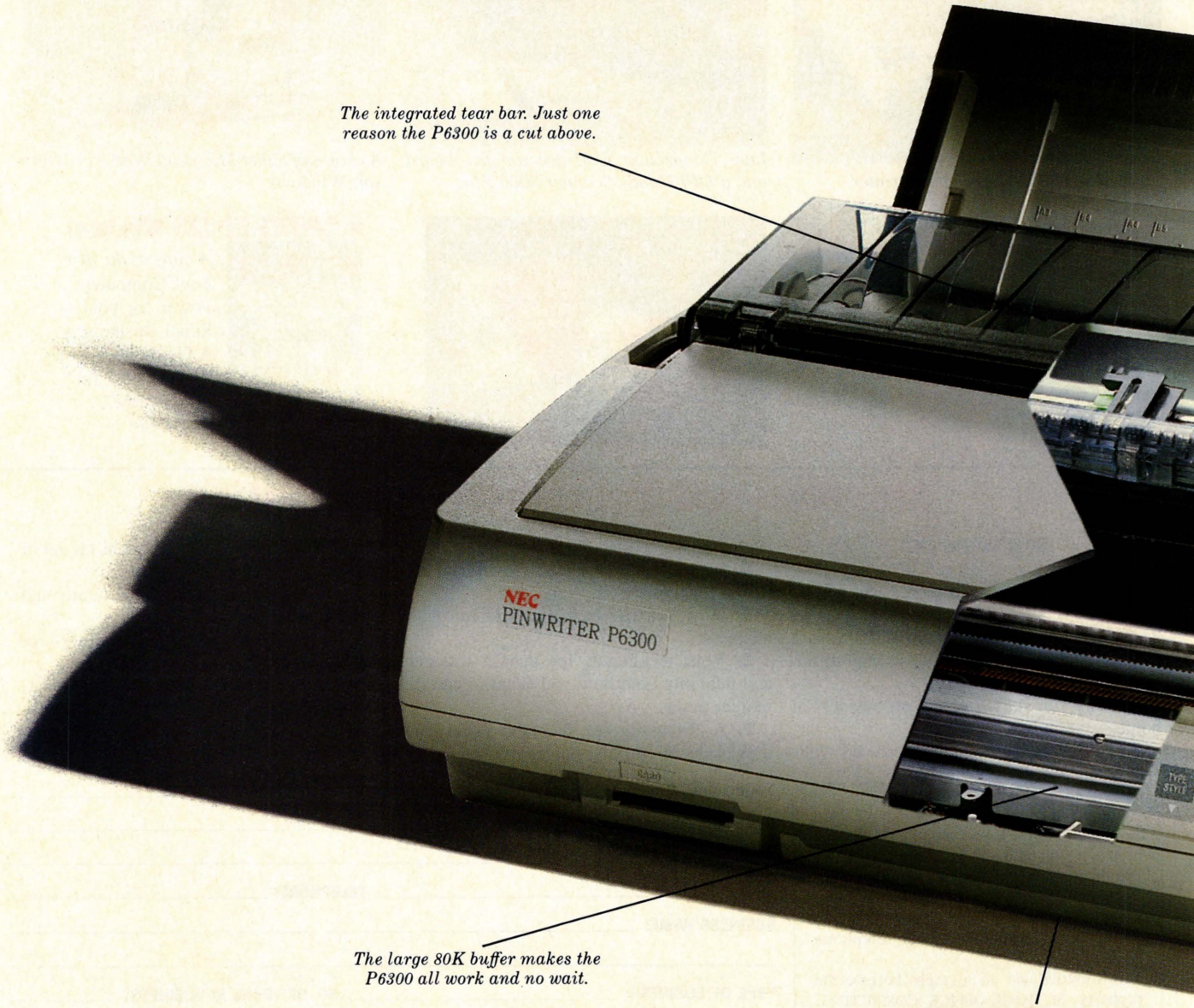
APPROX. ANNUAL PROFITS*: _____ **APPROX. GROSS ANNUAL INCOME *:** _____

**Income and product information will be kept in strict confidence unless entrant gives permission for release of figures.*

Only the new NEC to outperform any dot-



The integrated tear bar. Just one reason the P6300 is a cut above.

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The bottom feed slot permits trouble-free handling of multipart forms and labels.

Introducing the NEC Pinwriter P6300.

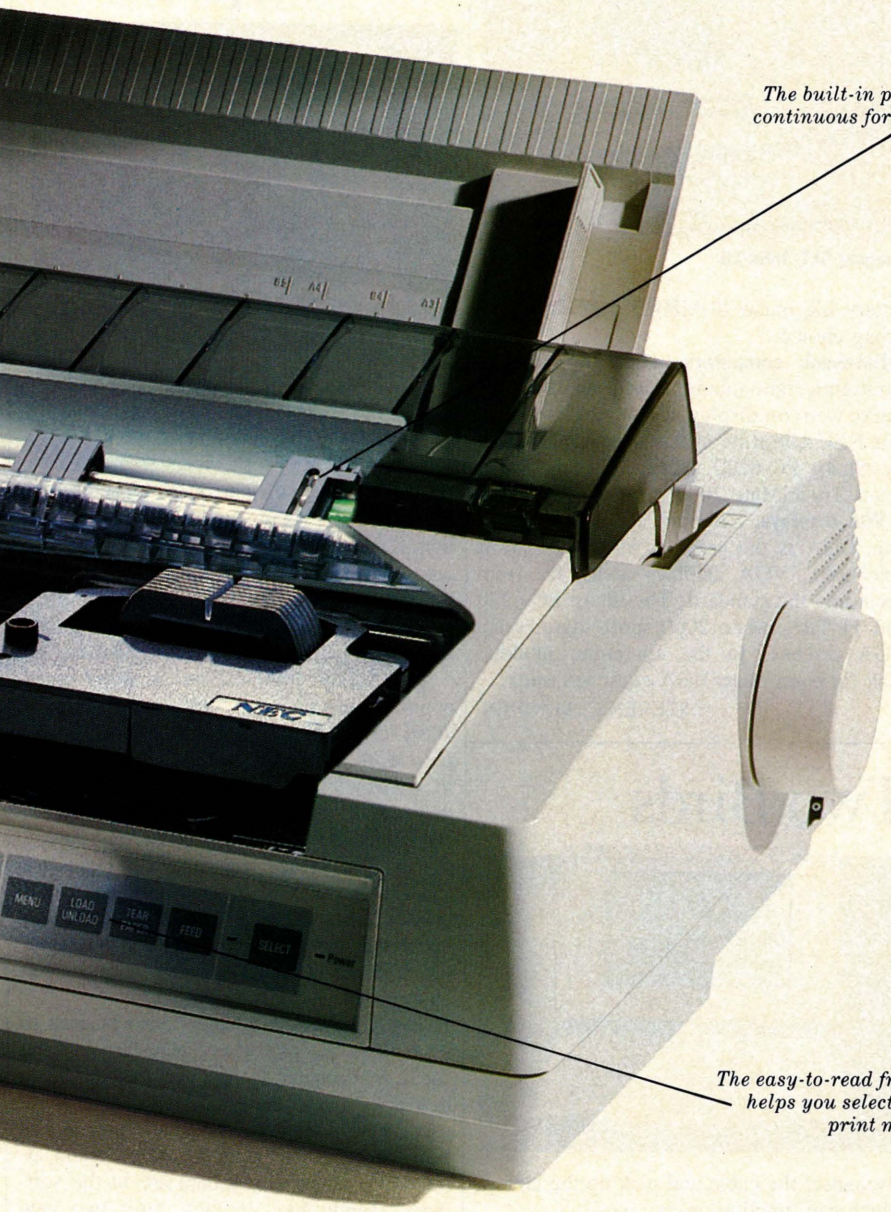
Only the Pinwriter® P6300 printer from NEC has the guts to deliver this much glory: Bold, black print quality that makes a statement with every line. Color graphics* that turn not only heads, but opinion. Eight standard fonts that let you do more, more impressively. And a Quick Gothic™ font that gives you letter-quality output up to two-thirds faster than anything in its class.

C&C Computers and Communications

*Color kit sold separately.

NEC Technologies, Inc. 1414 Massachusetts Ave., Boxborough, MA 01719. 1-800-NEC-INFO. In Canada, 1-800-343-4418.

P6300 has the guts matrix printer in its class.



The built-in push tractor feeds continuous forms from the back.

The easy-to-read front display panel helps you select typefaces and print modes.

But the beauty of the P6300 (and its narrow-carriage brother, the P6200) extends beyond the printed page. Because they give you the ability to print on everything from 24-pound letterhead and envelopes, to continuous forms, labels, and card stock. Plus the ease to go from one to another, from one minute to the next.

It takes guts to say the Pinwriter P6300 is the best dot-matrix printer you can buy today.

It takes a lot less than you think to bask in its glory.

NEC

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EDITED BY MARIE ALVICH-LOPINTO

Promising Prices for Portables And Other Laptop Trends

Sharp PC-5741

Compaq SLT 386s/20

There's fierce competition among laptop manufacturers. That's great news for consumers. Where there's competition, there's sure to be a price war.

At the recent Comdex show in Atlanta, numerous computer manufacturers introduced their new portables and laptops, giving us a chance to see what will be on computer store shelves within the next few months.

20-MHz 386SX-based laptops. Units like the Compaq SLT 386s/20 and the Sharp PC-5741 may not provide the full computing power of a 386DX-based laptop, but they do offer advantages over 8088- and 80286-based units. Speed, low price, and long battery life make 20-MHz 386SX laptops a strong choice.

Notebook computers. Three outstanding ultralightweight (about four pounds) computers were on display at Comdex: the popular NEC UltraLite and two new machines, the Sharp PC-6220 and the Texas Instruments TravelMate 2000.

VGA displays. Although CGA or double-scan CGA is the graphics choice for most notebooks, VGA displays aren't far from becoming the standard. The Sharp PC-6220 and TI TravelMate 2000 sport sharp, crisp VGA screens. In the upcoming months, look for even more VGA-equipped units.

— STEVEN C. M. CHEN

One Stone, Two Birds

Would you spend $2,999 to make your Mac Plus or SE run twice as fast as it does now—and make it portable?

Fantastic as it may sound, Outbound Systems has introduced a product that does both. The Outbound Laptop System is a 9.3-pound, battery-powered laptop computer equipped with a backlit LCD screen, 1MB of RAM, one floppy-disk drive, and Isopoint—an innovative mouse-substitute device that sits atop the spacebar. (A version with a 40MB hard drive is available for $3.999.)

So, what does this have to do with your Mac SE? Well, the Outbound system lacks the Macintosh ROM (Apple doesn't make these available to third-party manufacturers), so to make it operational, you (or a dealer or service technician) must remove the ROM chips from your old Mac and install them in the laptop. When the two computers are connected by a special cable, your desktop Mac acts essentially as a file server—running twice as fast as it used to. When you need to get up and go, you just

disconnect the cable and pick up the laptop, which can function on its own.

While at first I was skeptical about the whole concept, I realized that there is no other Mac laptop available that comes anywhere near Outbound's price and convenience (Apple's own Mac Portable costs almost twice as much as this unit, is twice as big and a lot heavier). As to the ROM transplant, well, why not? Nothing is lost and much is gained. Suddenly, owning an out-of-date Mac looks like a smart move.

— STEVEN C. M. CHEN

Tandy's Family Computer

During a recent visit to New York, representatives of Tandy Corporation showed HOME-OFFICE COMPUTING editors a prototype of a new computer system or, as they have dubbed it, a Home Information Appliance. As the name suggests, Tandy is aiming this system at families, not businesses.

The Tandy 1000 RL is an 8086-based computer that accommodates a maximum of 768K of RAM, comes with MS-DOS and *DeskMate*, Tandy's graphical user interface, in ROM. It has one 3.5-inch floppy-disk drive and can accommodate an optional 20MB hard-disk drive or a second floppy drive. The system has the 1000 series's CGA video and custom audio/music capabilities built in. The price of the system will be between $599 and $999, depending on the disk drive and memory options you choose. The monitor costs extra.

Tandy has done considerable research to learn what potential home users are looking for in a computer system and has striven to be responsive to the needs and desires these users have identified. Most of the innovations designed to make the new system attractive to family members are in the software. Tandy has, in fact, built two new modules into *DeskMate*, the Home Organizer and the Home Information Center. Within these modules are customizable applications for doing typical family financial tasks (like checkbook balancing and budgeting), organizational and communications tasks (like schedules, calendars, and messages), a travel planner, a kitchen planner, and similar software goodies, all operable by mouse or from the keyboard.

—EDWARD P. STEVENSON

See page 87 for product information.

THERE ARE OVER 60 BRANDS OF FAX. BUT ONLY SHARP HAS BEEN NUMBER ONE FOR THE PAST THREE YEARS.

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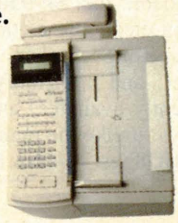

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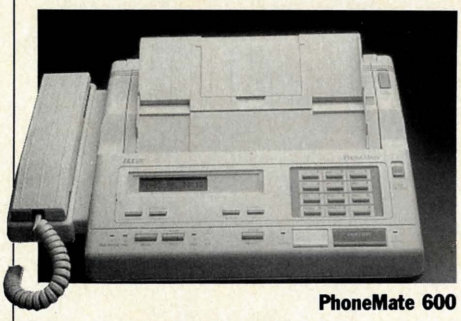
CIRCLE READER SERVICE 48

Two Phone Makers Enter Crowded Fax Market



PhoneMate 600

Southwestern Bell FX 3

At the recent Summer Consumer Electronics Show in Chicago, two well-known telephone manufacturers plunged into the already crowded fax-machine market. Southwestern Bell and PhoneMate introduced competitively priced, entry-level machines.

The Southwestern Bell FX 1 ($900) features standard and fine modes, polling, and a five-page automatic document feeder. The FX 3 ($1,300) adds a 10-page document feeder, an automatic paper cutter, a fax/phone switch, 24-number memory, superfine mode, and a two-line LCD.

The FAX 500 and FAX 600 ($800 and $900 respectively) are PhoneMate's new additions to the fax market. Both models sport seven-page automatic document feeders, but the model FAX 600 also includes a telephone, 50-number memory, polling, delayed transmission, and a one-line LCD.

There's no doubt that Southwestern Bell and PhoneMate have taken a major step forward by selling fax machines. Both companies already have successful telephone-product lines; let's see how they do with their fax machines. —M.A.L.

New Caller-ID Devices

BellSouth Model 20C

The privacy issue surrounding the controversial caller-identification service (Caller-ID) provided by many local phone companies doesn't seem to bother AT&T and Bell South. Both telephone manufacturers have introduced devices that (when hooked up to a touch-tone phone with the service) display the phone number of an incoming call. This lets people know who is calling before they pick up the phone.

Both AT&T's Call Display 64 ($90) and Bell South's 20C ($130) capture and store phone numbers, dates, and times of incoming calls. —M.A.L.

Enhanced Electronic Organizers From Sharp and Casio

Handheld electronic organizers are lightweight devices that offer many computerlike functions. These personal productivity gadgets can give you a state-of-the-art personal management system (with a phone directory and a daily schedule, for example) that fits conveniently into your pocket or briefcase.

At CES, Sharp Electronics (known for its popular Wizard line) and Casio (which manufactures the BOSS series) displayed their new electronic organizers.

Sharp added six new QWERTY-keyboard units to their Wizard lineup—two models comprise the new Signature series and four others make up the ZQ-series. The Signature models cost between $360 and $400 and have all of the built-in functions of the previous Wizards (the OZ-7000 series) plus a larger display, more memory (64K and 128K), and a help function. The ZQ units are priced between $110 and $240 and are designed specifically for the basic storage of important business and personal information; they don't require IC cards.

Sharp Wizard OZ-8200

Sharp Wizard ZQ-5200

Casio BOSS SF-9500

Casio's only new model, the SF-9500 ($300), uses IC cards (an electronic dictionary, a financial/legal spelling checker, a medical spelling checker, and a memory-expansion card are currently available) and has responsive raised keys, unlike the membrane keys on previous BOSSes. —M.A.L.

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CIRCLE READER SERVICE 42

The Best Reasons to Tackle Desktop Publishing

BY STEVE MORGENSTERN

Why should you get involved with desktop publishing? In many respects desktop publishing (DTP) is a bothersome undertaking that forces you to spend a substantial sum on software and hardware and then master the intricacies of it all. Just this morning I received a letter from Fran Poitras, a consultant from Buffalo, New York, who went shopping for easy-to-use DTP software at her local computer store. "I have to say I was impressed with the copy on the box, which says, 'You can be publishing in an hour!'

"Well, if there were ever jail sentences that could be given out by consumers for false advertising . . . this one would land the whole bunch of them in the slammer for a long time," Poitras writes.

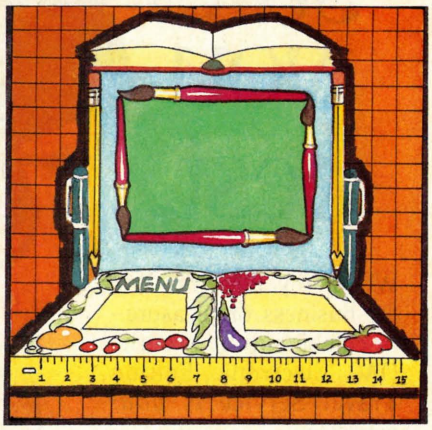
Yes, there are easier disciplines to tackle than DTP. Then again, if it were too easy, everybody would be able to do it themselves, a thought that sends a shiver down my bankbook. Still, the various programs, publications, and training aids available today let a reasonably intelligent person achieve a reasonable mastery of DTP techniques in a reasonably brief period of time. (Sorry, Fran, but an hour is cutting it a little close.) And since DTP abilities are not so simple as to be automatic, you can expect a reasonable return on your investment of time and money.

HIGH QUALITY, LOW PRICES

What makes DTP distinctive is the quality level you can achieve at an economical price with little or no outside assistance. Using my computer, laser printer, and a little ingenuity, I can produce an array of printed pieces, ranging from books and magazines to simple fliers. All of them will look every bit as professional as those created the old-fashioned way, with typesetters and mechanical artists.

I take it that I am preaching here to the Davids of the world rather than the Goliaths. Those of us whose offices used to be spare bedrooms generally don't have the resources of "the big boys," yet often that's precisely whom we're competing with for customers and clients.

The high-quality output of DTP can help close the gap. You may be a one-person accounting firm delivering a proposal to a prospective client who is considering both large and small firms. You may be building



a lawn-care business and want a brochure that looks good when a homeowner weighs it against the slick promotional materials of your corporate-franchised competition. Each audience for written communication in the two examples is very different, but the need to look as good as the Goliaths of the world is the same. And DTP gives you that ability.

High-quality publications created at reasonable prices. That's a pretty strong argument for DTP right there. But there's more.

THE FASTEST WAY

My major DTP project right now is a monthly newsletter I write, edit, and produce for an insurance company. Today is Monday, and I'll be faxing some last-minute changes to the client this afternoon. By tomorrow I'll have their approval, and that night I'll pop their changes into the layout and modem the publication file to the typesetting service bureau. I'll have high-resolution output in my hands by Wednesday. I'll need a few hours to mount the pages on boards, mark them for color, and call Federal Express. By Thursday (okay, Friday at the latest) the project is at the printer. That, my friends, is not bad, and my clients appreciate the fast delivery I provide.

While the speed of DTP is important to my projects, in some businesses it's absolutely essential. How about restaurant menus? A chef might decide on the specials of the day after scouting out the market in the morning—and have beautiful menus ready by lunch that day. How about the real estate agent who wants an up-to-date listing of available properties to hand out to clients? Or the fellow who buys and sells Victorian antiques? Lots of businesses deal in changeable conditions and commodities—DTP fits their communications requirements perfectly.

THE WORD OF THE PROFITS

The small-business benefits of DTP boil down to better communication and, through better communication, higher profits. When I say communication in discussing DTP, I mean it to encompass the full range of written materials. That means newsletters and advertising materials, but don't stop there. How about the forms you use? Or the reports you produce? Or the ads you run in newspapers and magazines? Then there are specialty publishing jobs geared to particular businesses, like menus or programs for events your company organizes.

Finally, there's the possibility of offering your services as a desktop publisher to other companies and individuals. Certainly, for some people this is the best reason to get involved in DTP—but it's not for everyone.

I started doing DTP as an extension of what I was already doing for a living: writing and editing publications for corporate clients. I already offered my clients the production services needed to create camera-ready mechanicals (that is, a job ready for delivery to the printer). However, I was using outside typesetters and artists for this purpose. That meant the process involved many hands, much time, substantial aggravation, and not enough profit.

By adopting DTP techniques, I cut down on all the negatives of the production process. Now I can offer a complete job, from concept to the print shop, at competitive prices and still make a profit every step of the way. Equally important, I have control of the entire operation, which lets me feel

When it comes to desktop-publishing advice, STEVE MORGENSTERN *is* HOME-OFFICE COMPUTING*'s best contributing editor.*

ILLUSTRATION BY MONA MARK

confident when making deadline promises.

The point to keep in mind is that DTP was an extension of the services I already provided. That's the ideal way to make money as a desktop publisher—to make it a part of a larger service. People don't buy DTP per se—they buy its end product.

A local company wants to send a brochure to its customers. The owner might go to an advertising agency, a design firm, a public-relations agency, or a communications consultant like myself. He probably wouldn't go to something called a *desktop publisher*.

There are thriving home-based businesses in each category mentioned above that have improved their bottom lines and their competitive positioning by incorporating DTP capabilities. And the list of potential desktop publishers is much more extensive. Consider the services you now offer and the publication requirements of your current clients. Do you deal with fraternal or nonprofit organizations? Maybe you could produce a members' directory for them. Maybe you could sell the ads that pay for that directory. Maybe it could be an annual publication, providing a predictable source of cash flow. And maybe, after producing the first one, you could show it to other organizations and offer to duplicate your initial success.

OK, that's an awful lot of *maybes*. However, the concepts are sound. Build on your existing talents and client base and incorporate DTP in your business, but sell the final product rather than the service used to create it. If you can carry off that combination, buying a DTP system and learning to use it can be the best business decision you will ever make.

SAVING THE BEST FOR LAST

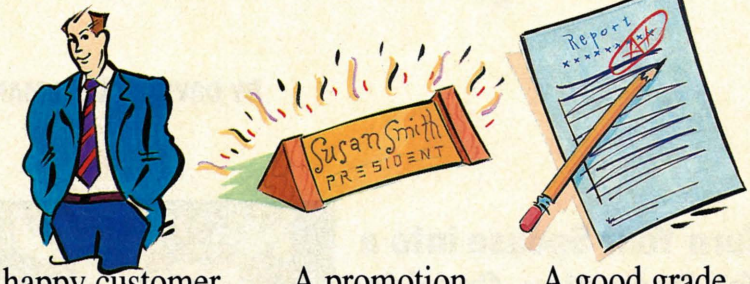
I can't let a discussion of the best reasons to use DTP rest without admitting that I have a final, underlying, highly subjective rationale for bothering with the art and science of DTP. It's exciting, and it's fun.

The tools of DTP are already highly advanced, and they keep getting better and more affordable. Being part of that process is a kick. I know folks out there who get misty-eyed over a fantastic spreadsheet macro they've created. Even I admit to a ripple of enthusiasm over the latest features in an innovative word-processing program.

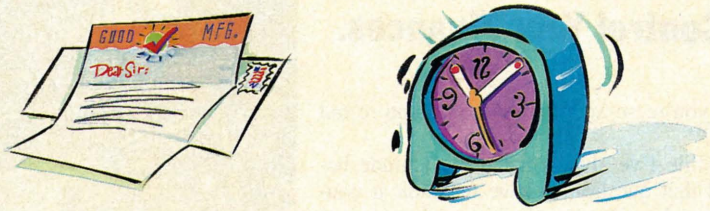
But frankly, they can't compare to the excitement of using a DTP system to create a first-rate publication with powerful text and a design that delivers the message with just the right combination of sizzle and substance. And not only do you get the pleasure of producing professional-quality work on your own desktop, you make money, too.

There's no question—combining pleasure and profits really is the best, and for some of us DTP is the technology that makes it happen. ■

What's Error-Free Writing Worth To You?



A happy customer. A promotion. A good grade.



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RW03

CIRCLE READER SERVICE 47

My 20 Best Money Hints

BY DAVID HALLERMAN

Turn Your Spouse into a Tax Deduction. Consider That Tip and Others to Control Your Finances.

"If you're so smart, how come you're not rich?"

While I've always hated the attitude behind that question, I have to admit it contains a kernel of truth: If you learn some smart financial moves, you're likely to make more money.

No, the tips presented here won't automatically confer wealth upon you, but by considering them, you'll gain more control of your finances. That's certainly a step in the right direction.

DEDUCTING BUSINESS EXPENSES

1. A business is an activity you engage in for profit—or at least that's how the IRS defines it. So to make sure your part-time enterprise qualifies as a business rather than just a hobby, you must operate with the objective of making a profit. You don't actually have to make a profit each year, but you must prove your profit motive by running your business in a proper manner. That means doing things like keeping complete accounts of all transactions, registering your business name with your county clerk by filing a "doing business as" statement, and getting a separate business telephone.

2. If the IRS can construe your business as a hobby, be doubly careful to show a profit motive. For instance, be prepared to demonstrate that you try to sell objects you make or collect, even if unsuccessful. Remember that with a hobby, you can deduct expenses only up to your income from that hobby. However, the same enterprise operated as a part-time business lets you deduct expenses that exceed two percent of your Adjusted Gross Income, even if those expenses exceed the income the business generates.

3. Should you show a profit in any three of five consecutive years, the IRS will typically presume that your business is truly an activity for profit. So, if you're at the edge, it would be wise to bunch deductions to create profit-making years.

4. If you have a new part-time business, but the IRS classifies it as a hobby, you can tell them not to examine your business status until your fifth year in business. Just file Form 5213, Election to Postpone Determination That Activity Is for Profit. After filing it, you can deduct all business expenses without challenges to your status as a business, even if you make no profit each year. That gives you a window to establish your business as a legitimate, profit-making activity. The catch? The IRS will almost certainly audit your returns after the four-year period. If you can't show them a profit objective at that time, you'll owe back taxes on your disallowed deductions, plus potential penalties.

5. It's one thing to deduct expenses incurred by your home-based business; it's another to deduct your home-office expenses. If the space is used exclusively for your business or profession and is your primary workplace, you can deduct a percentage of each expense that previously was not deductible at all: utilities, home insurance, maintenance, and rent. If you own instead of rent, you can deduct a portion of mortgage interest and real-estate taxes as business expenses instead of as itemized deductions, which lowers your self-employment (Social Security) tax. Homeowners can depreciate the home-office space as well. If your home office is your secondary workplace but is used for the convenience of your employer, then you're also allowed the same types of deductions.

6. You increase your odds of being audited if your new *full-time* business reports a loss or little income. If the IRS starts snooping around, just be ready to detail how you kept body and soul together.

7. Even though sales taxes are no longer deductible, you can still use them to save on your income tax. Just remember to add any sales tax to your cost basis of business equipment (save your receipts as proof). For instance, if you depreciate your computer, make sure to include sales tax in your cost—that will increase your depreciation deduction.

8. Instead of depreciating equipment over several years, you can deduct up to $10,000 in business assets in any single year. Just take a Section 179 deduction on Form 4562, the same form you use to depreciate assets. For example, instead of depreciating a computer over five years, you might want to write off the whole amount in one year. This works only if you have sufficient income, since you're not allowed to create a business loss with a Section 179 deduction.

KEEP IT IN THE FAMILY

9. Would you like to turn your spouse into a deduction? Just hire him or her. If you're a sole proprietor, your spouse's salary (like any employee's) becomes a deductible business expense. That expense (like any deductible expense) also reduces the amount of self-employment tax you must pay. However, if your business is set up as a partnership and your partner is your spouse, you'll have to pay self-employment tax—which is not a deductible business expense—on both of your incomes.

10. Hire your child, too. For a dependent under 14, the first $3,100 of earned income is tax-free; and any pay above $3,100 will be taxed at the lowest rate, currently 15 percent. Also, just as when you hire your

ILLUSTRATION BY VICTORIA RAYMOND

Senior editor DAVID HALLERMAN *regularly writes and edits finance articles for* HOME-OFFICE COMPUTING.

spouse, your child's salary becomes a deductible business expense, which lowers your taxes (which are probably at a higher rate than 15 percent). Don't forget, though, that when you employ family members, they must actually work to earn their money, or the IRS will disallow your deductions and can get you for tax fraud.

DEALING WITH THE IRS

11. Your best source of free information on federal income taxes is the IRS itself. Its series of publications can constitute the basis of the best tax-law library—the information is 100 percent reliable. Just call (800) 424-3676 to order publications. You'll find a partial list of available publications in your Form 1040 instruction booklet.

12. Another source of free IRS information is a series of monthly workshops they run for small and home-based businesses. Call your local IRS Taxpayer Education or Public Affairs office for details.

13. Worried about IRS penalties for not paying enough estimated tax? Just use Form 1040ES to pay an amount equal to last year's tax liability. You'll be safe from penalties then, no matter how much your income grows this year. However, don't confuse estimated tax payments with your actual tax liability. If you file for an extension, for example, you must pay the full amount due on taxes.

BETTER BANKING

14. One school of fiscal thought says to bank with only one bank. But there's a big advantage in multiple egg baskets, especially when you're dealing with loans and lines of credit. Should one bank lower or kill your credit line, you can still maintain credit elsewhere. Or if one of your banks is weak, it might be forced to sell its loans. The new owner of your loan could then demand larger payments or other restructuring or could even call in the loan entirely.

15. That's why you want to bank with strong banks. Find out how strong your banks are by calling Veribanc, a Massachusetts-based research company that evaluates the capital, earnings, and assets of more than 31,000 commercial banks, savings banks, and credit unions. Call (800) 442-2657 or (617) 245-8370 with credit card in hand for an instant rating. Veribanc charges $10 for the first bank and $3 for each additional bank, and after giving you the information on the phone, sends you written confirmation of your bank's rating along with an explanation of how the ratings work.

RAISING MONEY

16. In addition to the ubiquitous home-equity loan, another source of deductible-interest loans can be an account with a brokerage house. If you open a margin account, you can borrow up to 50 percent of the value of your stocks and bonds. Two warnings: You must pay full interest monthly for any of it to be deductible. And if your portfolio's value falls below your brokerage house's margin limit, you'll have to add enough money to your account, or sell part of your investment, to cover the margin.

17. Leaving the corporation and looking for capital to start your own business? Consider borrowing from yourself, in the form of a loan from your existing pension plan. Here's how it can work: Incorporate your new business and create a pension plan. Then roll over your vested corporate pension plan monies into your new company's plan. Set up your new plan so that it allows loans of up to 50 percent of your accrued funds. Borrow 50 percent of your pension plan at a fair-market interest rate. There's the capital for your new business. Your bonus? As you pay the loan back, you pay yourself back—the interest goes into your pension plan.

HOW TO CALCULATE YOUR REAL INTEREST RATES

18. You know that deductible interest, such as that on mortgage payments, costs less after taxes than nondeductible interest paid at the same rate. But how much less? Here's a simple way to figure it out: If you're in the 28 percent federal tax bracket, calculate your effective interest rate by multiplying your deductible interest rate by 0.72 (call this number the interest factor—100 percent minus your tax bracket's percentage). For those in the 28 percent bracket, then, a 10.75 percent deductible mortgage loan is equivalent to a 7.74 percent loan that's not deductible. If you're in the 15 percent bracket, multiply a deductible interest rate by an interest factor of 0.85. Those in the 33 percent bracket should use a 0.67 interest factor.

19. The same approach outlined in #18 can also be used to figure out the real value of tax-exempt interest. But this time you *divide* instead of multiply by an interest factor. For instance, if you're in the 33 percent bracket and invest in a tax-exempt mutual fund paying 6.5 percent interest, divide the interest rate by 0.67. That investment gives you the equivalent of a 9.7 percent taxable yield.

20. Speaking of tax brackets, remember to add in your percentage of any state or local income taxes when doing these calculations. So if you're in the 33 percent federal tax bracket, and your state income tax is 6 percent, your combined bracket is 39 percent. ■

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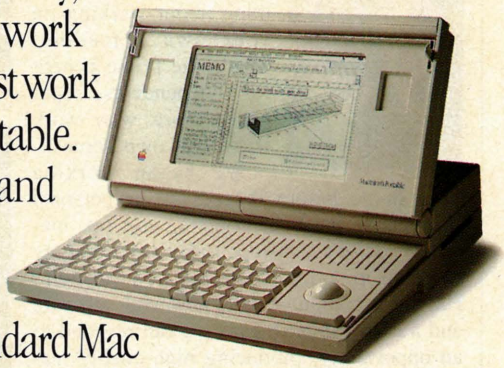

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The Best Thing About Working on Your Own? Freedom!

BY PAUL AND SARAH EDWARDS

What's the single best thing about working on your own? Freedom! That's the prime benefit for independents, especially those who work from their own homes.

We began working from home before the advent of personal computers, personal copiers, and fax machines, so we consider today's technology to be an important source of new freedom. Having a computer with powerful software and a laser printer means we can respond to an opportunity, producing high-quality materials overnight that in the past would have required weeks of coordinated effort. This is freedom from time and people constraints.

Having our own equipment means eliminating much drudgery and aggravation—from depending on specialists and employees who may be busy or temperamental to waiting for a turn at the copy machine.

Moreover, the freedom to work on your own, which many already take for granted, leads to a whole range of other freedoms that people rarely take for granted. For some people, these are *freedoms to*; for others, they are *freedoms from*.

THE FREEDOM TO . . .

Working from home offers independents more control than a traditional office environment. We think that some of the freedoms you'll cherish are the ability to

- set your own schedule, work the hours you want day or night, sleep in, take naps;
- make your own decisions quickly (or slowly), without a lot of red tape;
- start a business doing work that no one would hire a full-time employee to do;
- implement your own ideas and see them come to life, rather than watch a bureaucracy dilute them;
- set your office temperature as you like;
- change clothes at midday if you guessed wrong about the weather;
- decorate your office with the colors, lighting, and furnishings you prefer;
- play the music of your choice while you work;
- greet your children when they come home from school; and
- spend more time with your spouse or friends.

The price of freedom is responsibility.

THE FREEDOM FROM . . .

At the same time, independents avoid many of the annoyances that traditional workers encounter, such as

- commuting, which often means hours spent sitting in congested traffic;
- getting up before dawn to exercise, or exercising after dark when you come home late at night;
- attending endless meetings at which nothing much happens anyway;
- responding like a fire engine to a boss's emergencies instead of attending to your own priorities;
- modular office systems that provide minimal privacy and require hushed conversations;
- office politics, backbiting, and interacting with difficult people you would never invite into your home;
- expensive lunches and vending machines filled with gooey junk food;
- packing the kids off to day care in the early morning hoping you'll get back to pick them up before it closes; and
- breathing someone else's cigarette smoke.

WHAT PRICE FREEDOM?

In this land of the free, it's no wonder working from home is becoming so popular. At the same time, however, the biggest problems that people encounter working from home stem from the very same freedom it provides. When you don't have to leave the house, you can start to feel isolated and lonely. With no fixed office hours, lunches, or breaks, you can have a hard time getting down to work and sticking to business, not to mention closing the door on work at the end of the day.

This dilemma reminds us of something psychiatrist Victor Frankl once told us. The author of *Man's Search For Meaning* believes that the Statue of Liberty should be matched with a Statue of Responsibility on the West Coast—because the price of freedom is responsibility.

Certainly that philosophy applies to working on your own. ■

PAUL AND SARAH EDWARDS *are the authors of* Working from Home: Everything You Need to Know to Live and Work Under the Same Roof *(Jeremy P. Tarcher). They also operate the Working from Home Forum on CompuServe* (GO WORK)*, and cohost the "Home Office Show" every Sunday night on Business Radio Network.*

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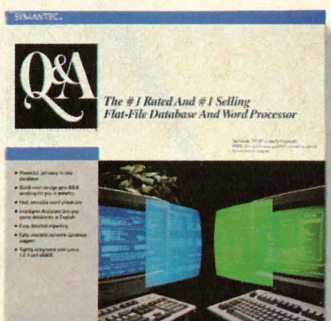

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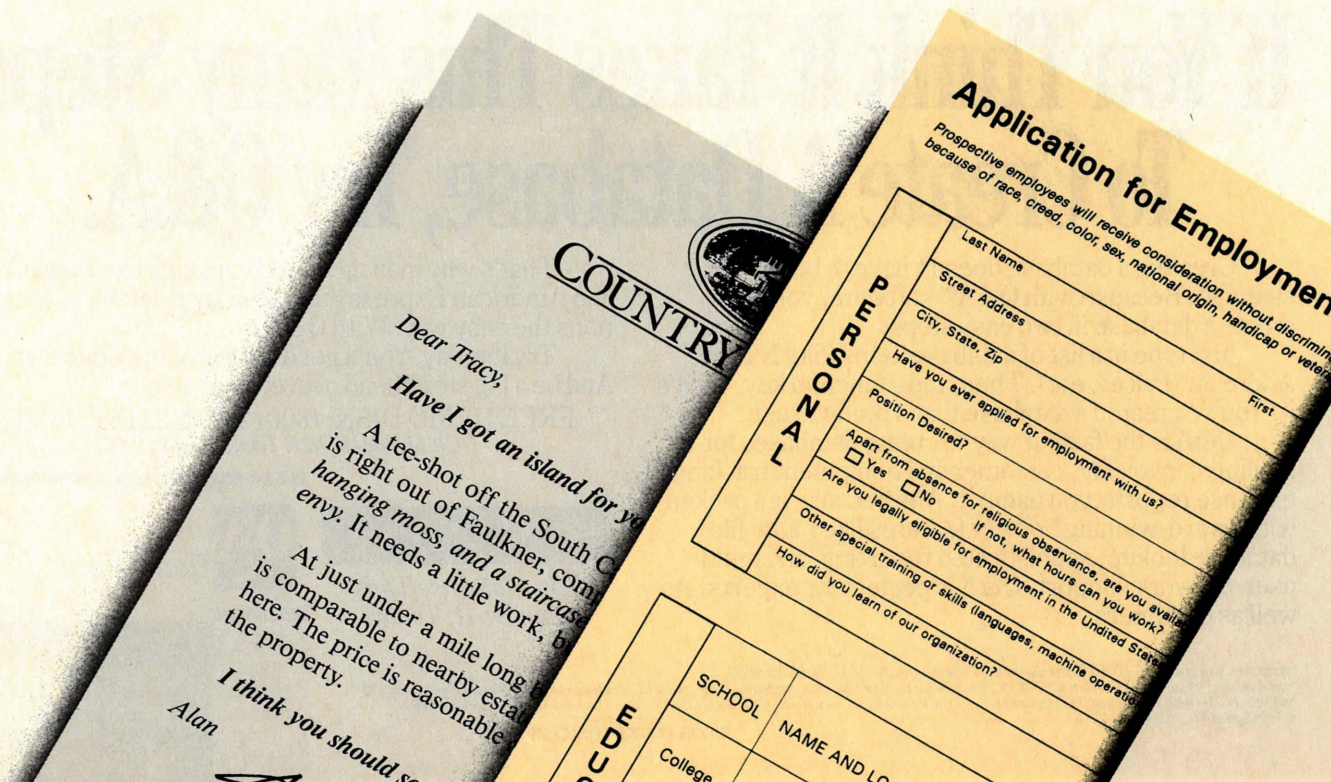

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CIRCLE READER SERVICE 30

THE BEST

10 BEST BUSINESS OPPORTUNITIES FOR THE 1990s

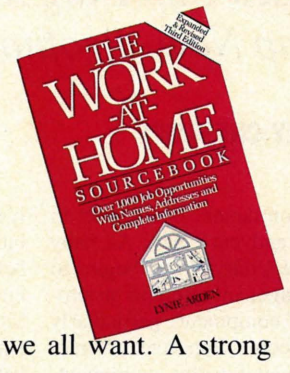
THE BEST WAYS TO SQUEEZE MORE OUT OF YOUR MS-DOS COMPUTER

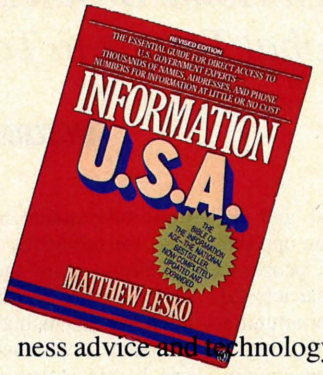
THE BEST HOME-OFFICE DESIGN TIPS

THE BEST WAYS TO KEEP CLIENTS COMING BACK

THE BEST BUSINESS RESOURCES

PLUS: THE BEST BUSINESS CONTEST

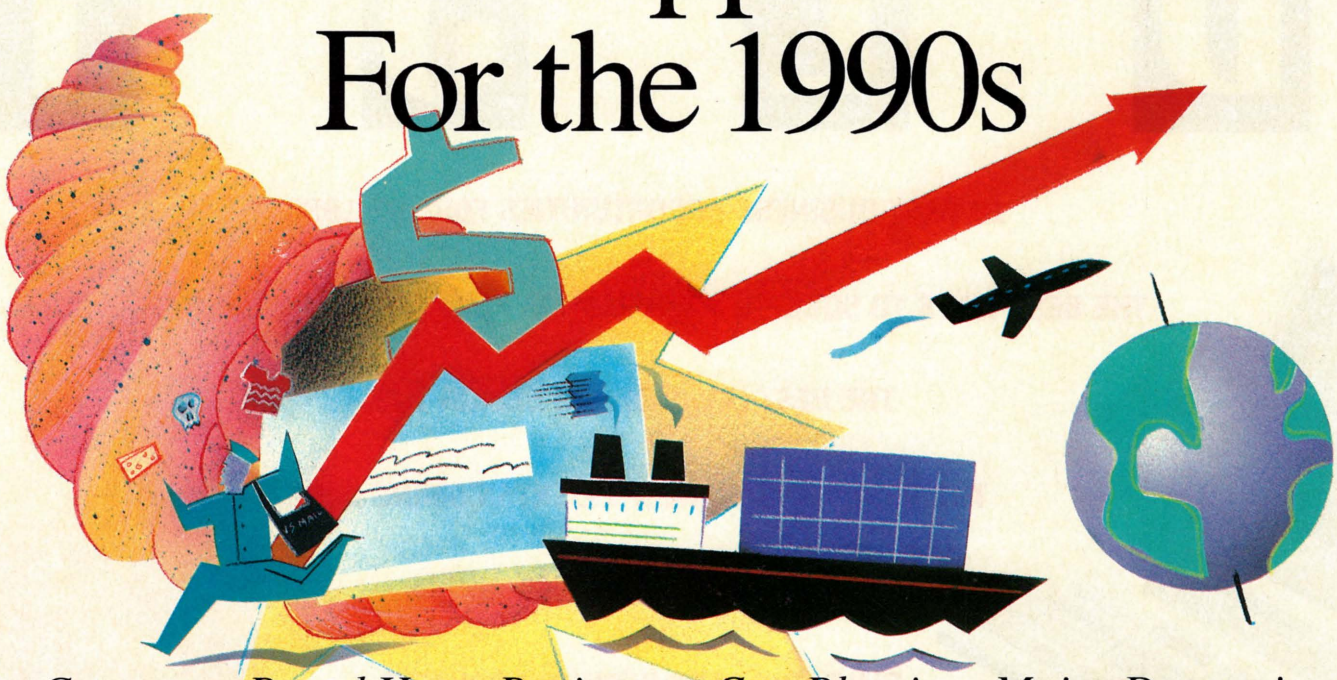




To be the best. That's what we all want. A strong drive to excel can be found in most home-based entrepreneurs. But being the best also means knowing where to turn for the best advice, tips, and resources.

For this second-anniversary issue of HOME-OFFICE COMPUTING, we dug up the best ideas we could find for helping you be your best. Within these covers you'll find more than a dozen stories that offer business advice and technology solutions for people like you who work from home. On the next twenty-four pages, you'll find five feature stories that tell you about great business opportunities and resources, give practical home-office design tips, and offer technology advice. And, be sure to turn to page 18 and enter our Best Business Contest. Your business ideas and practices could win you one of sixty prizes. —THE EDITORS

THE BEST Business Opportunities For the 1990s



Computer-Based Home Businesses Can Plug into Major Domestic and Global Trends to Tap New, Profitable Markets

BY JERRY CHESLOW

Numerous major global and domestic trends will create opportunities for all business people in the 1990s. As trade barriers fall worldwide, new import-export opportunities are created. Communism is collapsing in much of Eastern Europe, where governments are eyeing free-market economies. The European Economic Community (EEC) will unite into one economic system at the end of 1992.

Domestically, corporations are downsizing and buying more and more services from independent contractors in an effort to increase efficiency and cut costs. As baby boomers age and the United States begins to suffer a labor shortage, investments in productivity-enhancing equipment, particularly computers, will become important. Someone has to set up and run this equipment, which will require more technology consultants. The increasing use of computers has led to a proliferation of information stored in databases; again, someone not only has to manage that information but must help companies make sense of it.

Finally, with the vast majority of adults working, both traditional and single-parent households are strapped for time, opening the door for a range of personal and domestic services.

On the basis of interviews with trend analysts, economists, government officials, and business people, we've selected what we believe are the 10 best computer-based, home-business prospects for the 1990s. Since each of these opportunities seems equally promising, they are listed in alphabetical order.

JERRY CHESLOW, *a former foreign correspondent for ABC News and National Public Radio, is now a freelance journalist who covers business topics for a range of publications, including the* New York Times.

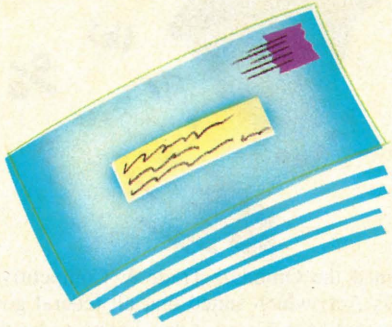
1. DATABASE MANAGEMENT AND ANALYSIS

The information explosion has spawned a new industry to sift through the mountains of available data. Among the most common databases are mailing lists aimed at serving the needs of businesses or fund-raising organizations. Some of the more specialized da-

tabases relate to the environment, current legislation, and export markets.

The largest public database, the 1990 U.S. Census, which will be published in 1991 (and will eventually be available on a CD-ROM disk), will create a number of opportunities for business people with computers powerful enough to sort the data. Later this year, the Defense Department will require all major defense contractors to provide on-line access to databases for the equipment they produce. The task of converting all the repair manuals for warplanes, ships, and other weapons systems is a major undertaking that will require hordes of independent contractors.

All these databases must be managed and maintained to be valuable resources. Market researchers who understand how to manipulate databases can reshape and resell that information to a wide variety of companies. Others can compile their own databases from scratch, to sell to larger product-marketing companies.



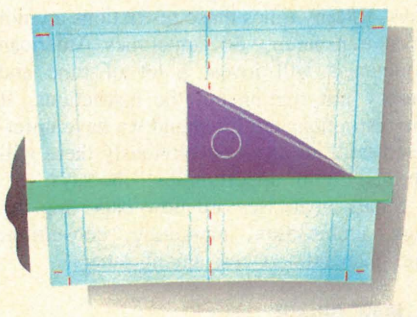
Jacquelyn Ottman, for example, who claims to store one of the largest environmental databases in the United States on her computer in a New York apartment, sells information and consulting services to large corporations and the federal government. Angie Nemet, president of the Small Business Network of New Jersey, Inc., based in Morris County, New Jersey, uses her membership database to create small-business directories and mailing labels. These are then sold to companies seeking to market to small-business owners.

"Some databases are incredibly small and specialized," says John Adams, managing director of InfoNational, a Dallas-based firm that operates an import-export database and consulting service. "For instance, one database tracks cattle semen for breeders; it caters to a very special market and the owner is making money from it."

2. DESKTOP PUBLISHING

"The era of the mass market is quickly giving way to rifle-shot marketing," says Michael Darling, associate professor of marketing at New York University. "That means that there is room for many smaller specialty publications and regional supplements to larger publications."

This translates into a wealth of opportunities for the independent desktop publisher, who can issue publications and newsletters quicker than larger companies. Among the businesses being brought into the home as a result of desktop publishing are advertising and public-relations agencies, newsletter publication, graphic design, and book publishing. The recent introduction of personal laser printers for less than $1,000 makes the initial investment in technology more affordable.

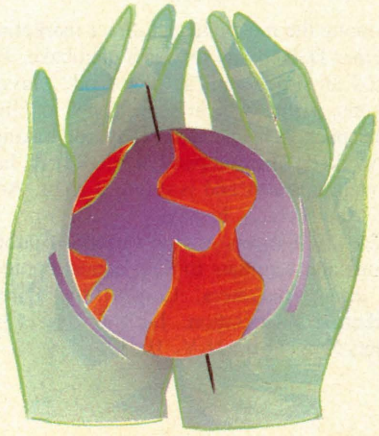


Desktop publishing has allowed many writers, artists, and printers to increase the scope of the services they provide. My own business was once writing and photography. Computers, a fax machine, a small photocopier, a scanner, and a laser printer have allowed me to become a full-service, one-man, advertising and public-relations agency. In the past year, I've designed newsletters for Citicorp, written for several telecommunications companies, designed and produced advertising materials for major computer manufacturers, and consulted for large foundations, training their employees in the use of desktop-publishing equipment.

3. ENVIRONMENT

"The environment is clearly the hottest niche market of the 1990s," says environmental consultant Ottman. "And because it is information-driven, it is perfect for small businesses with computers."

According to a recent Gallup poll, 76 percent of Americans consider themselves to be environmentalists. Another poll, conducted by the Roper Organization, found that 63 percent of Americans are willing to replace aerosols with spray pumps and 51 percent favor laws requiring utilities to install special scrubbers to reduce power-plant emissions, even if this leads to increased utility rates.



"Americans now perceive the environment as a health issue," explains Joe Schwartz, senior editor of *American Demographics* magazine. "Twenty years ago, environmentalists could be regarded as a fringe group. But today, people are afraid that they could be serving their children pesticide-ridden vegetables. So the environment has turned into a consensus issue."

Ottman says that many companies and individuals have already issued catalogs of environmentally safe products and that air filters and water purifiers are also selling well. "It's just the beginning," she claims. "Home-based business people could become sales reps for biodegradable cleaning products or purveyors of information on environmentally sound products. They could become consultants on the new government regulations or on the technical aspects of environmentally sound packaging. Companies will be looking for new product ideas, such as new kinds of healthy cereals or cosmetics that are not tested on animals. There already are public-relations and advertising firms that specialize in environmental issues. The possibilities are endless," she says.

4. GENERAL BUSINESS SERVICES

"Today, one person armed with a computer and operating from home can be just as effective as a big company in providing many business services," claims Arnold Brown, of Weiner, Edrich, Brown, Inc., a Manhattan-based firm specializing in trend analysis and the management of change.

As corporations downsize and farm out as many business services as possible, growth areas for home-based entrepreneurs during the 1990s will be accounting, marketing, tax preparation, executive recruiting, and employee leasing. Many of today's fastest-growing franchises are home-based business-services companies (*see "Great Franchise Opportunities," in the August 1990 issue.*)

In addition, the growing number of independent business people, telecommuters, and small businesses that have no full-time clerical support will depend on other independent contractors for business services.

5. IMPORT-EXPORT

The United States now has free-trade agreements with Canada (as well as Israel) and is negotiating on a similar agreement with Mexico, which could lead to a Common Market of North America. The EEC will be united in 1992, and Eastern European countries are racing toward free-market economies. The United States is in the process of converting to the metric system,

which will create many more exportable products and services. All of this spells business opportunity.

"The home-based entrepreneur using a computer, a modem, and a fax can work our system as well as any corporation, after going through the learning curve," says InfoNational's John Adams.

Adams says that more than 35 percent of the people using his database and related consulting services are home based. "Some go through the database looking for specific items they can buy or sell. Others look for whatever tickles them and then deal in that item for the challenge. One fellow looks for airplane propellers for South American companies. Others sell oil-field machinery, used medical equipment, or pharmaceutical products."

The formation of the EEC will mean that information on the needs of all the EEC countries will be centralized, according to Adams. That will make it easier for home-based importers and exporters to find buyers or sellers for their products or services.

Adams believes that the growth of the import-export industry will spawn a host of new businesses. Among them will be document preparation, international marketing, import-export software development, and information brokerage on products and services that could be imported or exported.

Another reason to assume that exports will grow is that the federal government is trying to liberalize the international trade in services. Negotiations are now underway with the other 96 nations involved in the General Agreement on Tariffs and Trade (GATT) treaty for an agreement on trade in services, according to Frederick T. Elliott, the Commerce Department's EEC 1992 coordinator for services. "We now have a situation in which service exports to many countries are severely restricted," Elliott says. "Many times those restrictions are not even transparent. So sometimes American companies will invest a lot of time and money just finding out the restrictions. If the restrictions are lifted and we have unfettered trade in services, obviously there will be many more opportunities," he says.

Small businesses are now exporting design, architecture, marketing, consulting, and financial services, among others.

6. MAIL ORDER

Anything—seeds, skull replicas, food, computers, clothing, you name it—can be bought and sold through direct mail. Close to $130 billion of mail-order products were sold in 1989.

According to Chet Dalzell, media-relations manager for the New York–based Direct Marketing Association (DMA), 91.7 million Americans, or 51.4 percent of the country's adult population, made purchases from home during 1989. That figure represents a growth of 9 percent over the previous year.

"The medium is growing rapidly because people are time deprived," said Dalzell. "If you have the right product and patience, you'll make it work."

Dalzell says that many small businesses start by printing fliers and carefully testing their messages on small numbers of potential customers. "Lillian Vernon, one of the largest direct marketers in the country, started in her garage with just a few products and built a multimillion-dollar business," he said. (*See "Growing a Business," an interview with Lillian Vernon, in the September 1989 issue.*)

Among the most unusual direct-marketing schemes Dalzell has seen is a clambake. He placed an order with a Cape Cod, Massachusetts, firm, which sent a pot of live clams packed in ice and ready for baking. "It worked. The company, a small firm, has a novel approach and is doing it right. And that's the secret," he says.

The DMA offers a wide variety of publications and seminars to help educate potential direct marketers. Contact the Direct Marketing Association, Inc., 6 East 43rd Street, New York, N.Y. 10017.

7. METRICS

September 30, 1992, is the starting date for the total conversion of the U.S. economy from inch-pound measurements to the metric system. The opportunities for small-scale entrepreneurs are as wide as the economy itself, according to Jim McCracken, metric coordinator at the U.S. Commerce Department.

"There will be room for all kinds of people to help businesses metricize," says McCracken. "Businesses will need people to write software to aid in the conversion. They will need planners to help them decide when and how to convert from inch-pounds. If they invest too much in doing it all at once, some companies could go bankrupt. But if they wait too long, the market could pass them by."

The metrication of the U.S. economy was mandated in 1988, when President Reagan

signed the Omnibus Trade & Competitiveness Act, which stated that all federal government agencies must develop plans for the conversion to metrics by the end of fiscal year 1992.

McCracken stresses that there is no final "M-Day" for the total metrication of the federal government, but that after 1992, government agencies will purchase more metric products and fewer inch-pound ones. Many government agencies have already begun asking their chief suppliers for recommendations toward a smooth transition to metrics.

Among the Defense projects that already use metrics are Strategic Defense Initiative, Space Station B, and several weapons systems. Already, government agencies are beginning to give seminars on the conversion to metrics, indicating that there will be increased opportunities for lecturers and consultants in the field. At one such seminar last fall, the Nuclear Regulatory Commission announced plans to use metrics in future power plants, industrial applications of radioactive material, and waste management.

McCracken maintains that the conversion to metrics is essential for the United States to remain competitive in world markets. The United States is the only country still using inch-pounds, which limits export potential.

"Recently a major U.S. manufacturer had a shipment of small appliances rejected

by Saudi Arabia," McCracken explains. "The cords on the American appliances were six feet long and didn't meet the Saudi standards for two-meter (78 inches) cords. Companies that don't metricize will see that happening more and more, especially after the EEC announces its standards in 1992."

Lorelle Young, president of the U.S. Metric Association, which has advocated metrication of the economy since 1916, maintains that many corporations have already wasted considerable time by not converting to metrics and will need help catching up. "There will be an urgent need for videotapes, training materials, and trainers," she says.

8. PERSONAL SERVICES

Of all new businesses started in the United States, the largest category, after retail, is home services. According to David Biddulph, president and founder of the Market Force Corporation, a home business that compiles information on home-based businesses in Florida, Texas, Georgia, Arizona, and California, 16 percent of all start-ups are service businesses targeted at the home.

A recent study by Morgan Stanley and Company indicates that the trend toward services will continue to grow, as the baby-boom generation matures. The study, conducted by Stephen S. Roach, found that baby boomers are now scaling back spending for essentials such as shelter and food, and scaling up expenditures for discretionary items, or luxuries.

"The main reason for the success of services is that people today feel they just don't have enough time to do the things they really want to do," says Brown. "So they will be more willing to trade money for time, by getting other people to do more things for them," he says.

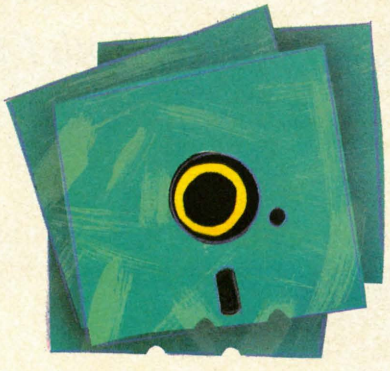
"Twenty years ago, when I started in business, we dealt only with rich women," said Coralee Smith Kern, founder of the Center for the Study of the Cottage Industry and president of Maid To Order, a home-based cleaning service. "Now our clients come from every sector. Mama's out working and says to Papa, 'We need help.' "

Just a few of the possibilities for personal-service businesses are maid service, swimming-pool maintenance, shopping, dog walking, catering, video delivery, and home security. Several services are already being franchised. ServiceMaster, a residential-cleaning franchise, now has 4,200 franchisees throughout the country and revenues of more than $1 billion a year.

9. TECHNOLOGY TRAINING

"I don't know how many homes I've entered where the VCR bought two years ago is still flashing on 12:00," says Brown. The proliferation of new technology has created a vast number of niche markets for consultants, according to Herman Holtz, author of many business books, including *Making Money with Your Micro*. Holtz now trains consultants in methods of consulting.

Although there are no reliable estimates of the amount of money being spent on computer training, some consulting firms say that it tops $10 billion nationwide per year. The need is expected to grow as the number of computers in the workplace increases. The major hardware and software companies, for example, are focusing product-marketing efforts on service, support, and training, because they realize new features in products will otherwise go unrecognized and unused.

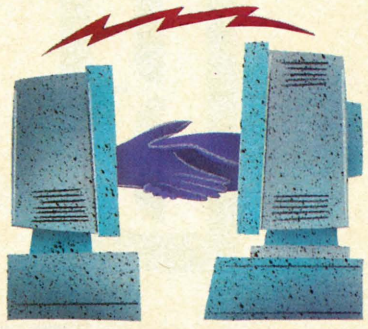


"Many people specialize in one type of machine or even one type of computer program," Holtz said. "The world has become much more complicated, and consultants are needed to help people understand it and take advantage of what's available."

10. VIDEOTEX

Videotex (an interactive electronic system delivered primarily on-line) stands to become a lucrative business opportunity during the 1990s. "As more American households obtain computers, the hardware barrier will fall and the use of videotex will increase significantly," says Darling.

According to the Videotex Industry Association, about two million North Americans now use videotex, up 30 percent over the past five years. The largest provider is CompuServe, which has more than half a million subscribers. Minitel in France, however, is by far the world's largest videotex service. In addition to these on-line services, special videotex terminals are being placed in airports and other public gathering places.



Although the establishment of videotex networks is big business, unsuitable for a home-based entrepreneur, the supply of information to Prodigy, Compuserve, Dow Jones, Minitel, Bell Canada, or other videotex services is suitable for the computer-based home-business person. "You have the marketing services of the big videotex companies selling your product," says Darling." So you can easily operate your business from home."

Paul and Sarah Edwards, for example, operate the Working from Home Forum from their home in Santa Monica, California, reading and responding to on-line questions. Similarly, Steve Morgenstern writes a weekly mystery game based on Broderbund's *Where in the World Is Carmen Sandiego?* for Prodigy.

FORMULA FOR SUCCESS

Many independents have already picked up on these trends and created their own special niches. This is especially true in all the heavily computer-related fields, such as database management, technology consulting, desktop publishing, and videotex, which began growing during the past decade. But as companies use computers in more sophisticated ways, these areas will continue to grow. As they do, there is literally no limit to the type or number of specific businesses that can be sculpted from the broad categories.

Other promising areas—such as metrication, the environment, and import-export—are just beginning to open up. By applying technology to your particular area of interest or expertise, you can create your own niche.

Besides the opportunities listed above, interviewees also mentioned bed-and-breakfasts, health care, child care, elder care, English as a second language, and translation as good potential businesses to pursue. They are not included in our list, however, either because their potential markets are smaller or because of professional licensing and residential zoning requirements.

Whether you want to break into an established or a burgeoning field, the formula for success is the same: Establish your skill, identify your market, and target your promotions to that market. And to keep your overhead low, start your business from home. ■

THE BEST Home-Office Design Tips

You'll Work More Efficiently When Your Office Is Both Functional And Comfortable

BY MARK ALVAREZ

A home office is personal space, where every single element should be considered with regard to your comfort and convenience. Forget fashion. Forget status. Think function.

Beyond those general principles, here are a dozen of the best tips for setting up an efficient work space in the computer age.

MARK ALVAREZ *is the author of* The Home Office Book: How To Set Up and Use an Efficient Personal Workspace in the Computer Age *(Goodwood Press, 1990; $14.95 paper, $24.95 cloth). He works from his home office in Woodbury, Connecticut.*

FIND A ROOM (OR AT LEAST A SPACE) OF YOUR OWN

Good work requires concentration, so to the extent that it's possible, your home office should provide both spatial and acoustic privacy. In many homes, this privacy can be only symbolic, and often it has to be guarded by rules and clocks rather than walls and doors. In some, a simple rug on the floor can mark the limits of your office. In others, a plant, low table, or arranged lighting can suggest a separate space. Try to find a location around which you'll be able to establish some barriers, even if they're only implied or psychological.

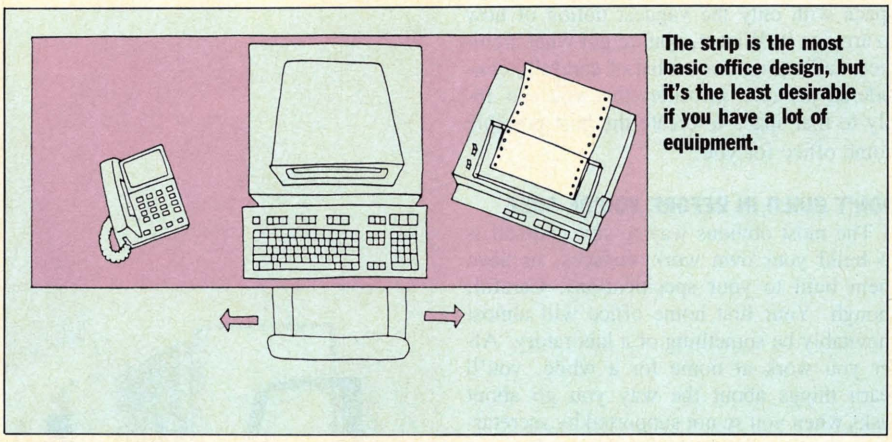
As with virtually everything else in life, you'll probably have to make some important basic choices when setting up office space. If you choose wisely, you're in business. If you make the wrong choices, you've got problems—and so does everybody who lives with you. My new office, for example, used to be the garage, so we no longer have a place to garage our car. To us, that's no big deal. To you, or to someone in your family, it might be.

THINK BIG

You'll always need more room than you think you'll need, and you'll always fill whatever space you've got. You take up space as you work, and so does the comput-

er, fax machine, printer, scanner, phone, answering machine. . . .

And remember that when you work at home, you have no central filing system, no corporate library, no office-supply closet down the hall, no mailroom in the basement, and no maintenance staff. You handle it all; you store it all. Take it as truth: In ~~home~~ offices, bigger is better.



The strip is the most basic office design, but it's the least desirable if you have a lot of equipment.

DRAWINGS BY MEL MATTHEWSON

GET WIRED

A successful home office depends on electronic tools and communication with the outside world. That means you need electrical plugs and phone jacks to turn on and tune in. If you're building an office from scratch, liberally scatter plugs and jacks around the room. You may think you know where you want your desk to go, but after a few months you may want to change your entire design. You don't want to lock yourself into a certain desk arrangement just because it's close to plugs and phone jacks—nor do you want to labor in a tangle of wires and lines. And, if you use a fax machine or modem, you'll almost certainly need an extra phone line to handle that data.

AVOID BAD SPACE

The Rule of Bad Space is simple: Never establish your home office in a location—no matter how great it may be in other ways—that will often be uncomfortable. This sounds simple, but it's not—because bad space is invariably the most tempting space. It's often a spacious area in a part of the house where no one will bother you. But bad space is also often too cold, too hot, too damp, too bright, too dark, or it combines several of these unattractive traits. The key to avoiding most bad space is making sure that your potential office location would make a reasonably comfortable living space (for you and your equipment). After all, you're going to spend a lot of time there.

Some bad space, which looks good in every other way, just doesn't suit your work habits. For example, I've got a big, bright, framed garden house with six double-hung windows in my backyard. It's already wired for electricity, and it could be insulated and sheetrocked in just a couple of days. For years, I thought it would make a great office; I'd have lots of room, light, and privacy. Then I thought more about the way I work. I often go back to the computer after supper or late at night. I realized that getting bundled and traipsing 150 feet in the dark through cold snowdrifts during a New England winter wouldn't be conducive to evening work. An unattached office might be great for people who work regular hours or live in gentler climates, but it's not for me. In my circumstances, the building out back is bad space.

PLAN YOUR SPACE

When all is said and done, there are four standard home-office layouts: the strip, the L, the galley, and the U. Each can be interpreted in a number of different ways.

1. The **strip**, for example, can be a long, kitchenlike counter, or it can be made up of a straight-line sequence of components and discrete pieces of furniture—a computer rack, say, next to a small worktable near a bookshelf or filing cabinet. Obviously, if you've got a lot of equipment or need a great deal of storage space, your wall has to be pretty long, and not everything will be within easy reach. A simple strip office can work fine, especially if you don't expect to accumulate much fancy equipment, but it's probably the least desirable of the basic designs.

2. In an **L-shaped** layout, the shorter leg can be something as simple as a typing return or as grand as a duplicate workspace. L's are more common than strips, partly because corners are often wasted space that home-office hunters can put to good use, and partly because they're more convenient.

Many small home offices qualify as L's because their owners have discovered that the computer printer is the joker in the deck. It just won't fit on the average primary work surface. So it's often set on a small table or desk placed off to one side or the other and rotated 90 degrees for ease of use. Sometimes what looks like a strip office is converted into an L every time its owner sits down to work. That's when the printer (or the computer, in some cases) is pivoted out on its stand or rack.

3. A **galley** is basically two strip arrangements back to back, but it doesn't really have to be a narrow space lined with two long parallel counters. A more common arrangement puts the office chair between a wall with a work surface and a standard desk facing in the opposite direction.

The latter arrangement has become a common layout in executive offices all over the world. The computer in these setups is usually on the work surface behind the desk, which is generally used for handwork, reading, and phone calls. There's often a small, furnished seating area out front for conferences with clients and colleagues.

I've always liked galley layouts, because it's easy to swivel your chair if you want to move from computer to handwork or to the phone.

4. A **U-shaped** layout can be thought of either as a galley with a connecting leg or an L with two short extensions. A U incorporates the convenience and easy access of both. My new office is a classic U: three work surfaces set against three walls. But I've happily worked in U arrangements in which only one or two walls came into play, and in many corporate offices, U-shaped layouts don't rely on walls at all. A U really gives you the sense of sitting at your own personal control center—everything important is usually within easy reach.

Your space will probably suggest some version of one of these basic layouts. Don't try to squeeze an inappropriate plan into a space, but do keep poking and prodding at the arrangement you come up with. The best plan isn't always the most obvious one. And even if your basic idea is sound, you can almost always think of ways to improve it. The best time to ponder the possibilities is when you actually settle down to draw your plans on paper.

ANALYZE YOUR WORK HABITS

Once you find the right space, analyze how you'll work. The obvious place to start is with your body. Are you left- or right-handed? Are you tall or short? Are you physically disabled in any way?

Also, consider your work habits, the jobs you'll be doing, and the equipment you'll be using. For example, do you habitually spread papers around you, or do you work neatly from files or individual documents? Do you like to get up and prowl around as you mull over knotty problems? Will you be working mainly at your keyboard, or will you be doing a lot of handwork? Do you need a second workstation—a drafting table, perhaps, or a light table for checking slides? What office equipment will you install right away and how much room will it take up? Do you expect to be buying more soon? Will you be receiving clients? If so, how many at a time?

Detailed self-analysis is vital. Without it, you approach your potential home-office

space with only the vaguest notion of how to arrange it. With it, you've got what architects call a program—a list of carefully considered personal priorities that you can apply to that space to create the best possible home office for you.

DON'T BUILD IN BEFORE YOU'RE SURE

The most obvious way to suit yourself is to build your own work surfaces, or have them built to your specifications. Careful, though. Your first home office will almost inevitably be something of a laboratory. After you work at home for a while, you'll learn things about the way you go about tasks when you're not supported by secretaries and some of the other elements of corporate life. If you've built everything in, it's hard to make adjustments.

Stay flexible in your first home office. Use the most versatile, adjustable, nonbuilt-in furniture you can afford. And keep track of every drawback, every inconvenience, every annoying pain in the neck. Your time will come, and when you do build in, you'll not only get what you want, you'll get little that you don't.

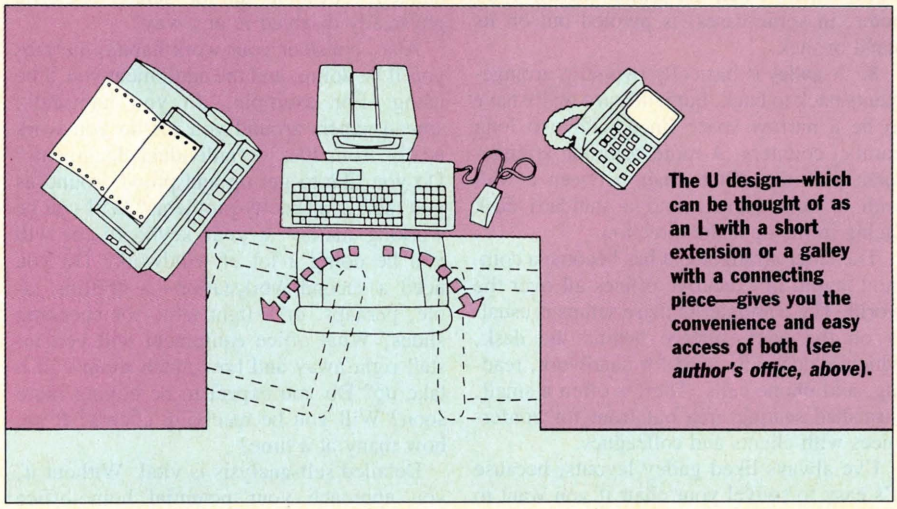
When you're shopping for furniture, remember three words: Adjustable. Versatile. Modular. You won't go wrong.

CONSIDER A TABLE AS A DESK

The tables offered by furniture manufacturers aren't much different from basic desks. But they're usually bigger and often adjustable. That's the reason I like them so much.

I've found that for my style of work a big, flat surface set at keyboard height does the trick (*see "Standard Measurements"*). It holds computer equipment, a printer, a phone, a lamp or two, and a few file trays—with room left over for clipboards, loose files, and my inevitable pile of papers.

I work mainly on the keyboard, and I've found that when I need to take notes by hand (during phone calls, for example) or when I just want to push a pen for a change, scribbling on a lower-than-normal surface is no big problem. And with an adjustable unit, I can always raise the table if I know I'll be working by hand for a longer stretch.



The U design—which can be thought of as an L with a short extension or a galley with a connecting piece—gives you the convenience and easy access of both (see *author's office, above*).

KEEP THE COMPUTER OFF YOUR DESK

Most computer setups waste precious desk space. Many people who use an IBM clone or a Mac II stack the monitor on top of the CPU, with the keyboard in front. This works all right for computing, but it hogs desk space.

The author chose a classic U, partly because the three walls of his office (a converted garage) in Connecticut lent themselves to such treatment. All his books, files, and equipment are within easy reach, yet he has plenty of desk space for writing and keyboarding. And neither natural nor artifical light is directed at the monitor screen, so there is no glare.

PHOTOGRAPHS BY DON HEINY

There's no law that says you can't stand your computer system on edge. Consider tucking yours out of the way under your work surface, with your monitor propped up on an articulating arm. Then, whenever you want to, you can simply push the keyboard off to one side, and the desk in front of you will open up all the way to the wall.

CONTROL MONITOR GLARE

One great enemy of comfort and efficiency is monitor glare, which can cause eyestrain and headaches. Glare obscures characters under bright puddles of reflected light, and you wind up leaning forward, tensing your neck muscles and squinting to make out what you're doing. Almost everyone who's used computers at all has maneuvered through this unpleasant little dance and experienced the painful result.

You can eliminate glare by making sure that no light sources bounce off the monitor toward you. Position lights so their beams won't reflect onto your screen or fit them with diffusers to soften their glow. Consider the location of windows and make sure you can redirect natural light when necessary.

The ability to control glare is all too often ignored in the design of a new home office. Be sure to give it careful thought; it will save you plenty of headaches.

DO A WALK-THROUGH

Once you've decided on a design—or think you have—test it by ''walking through'' your work routines. It's best to

STANDARD MEASUREMENTS FOR WORK AREAS

An architect designing a house begins with standard measurements for basic room sizes and ceiling heights. Likewise, in designing a home office, you should start with standard measurements for placing office elements in the room, although you'll eventually want to factor yourself into the equation.

Computer monitor. Place the monitor 16 to 28 inches from your face. You'd probably want a 9-inch monitor at the close end of this range. If you use a big, oversize monitor, you probably want it beyond the far end. My monitor is a standard 12-inch model, and I find it comfortable at about 26 or 27 inches from my eyes. It should be set below eye level, so that you look down 10 to 20 degrees when you're reading from it.

Place a copyholder in the same plane as your monitor so that your eyes won't have to work hard when they move from screen to paper.

Desk depth. A desk should be at least 22 inches deep, according to the books, but this is inadequate for many computer users. A CPU (if you keep it on your desk) and a keyboard can easily consume more than two feet. Even with my computer under my desk, I prefer my work surface to be three feet deep.

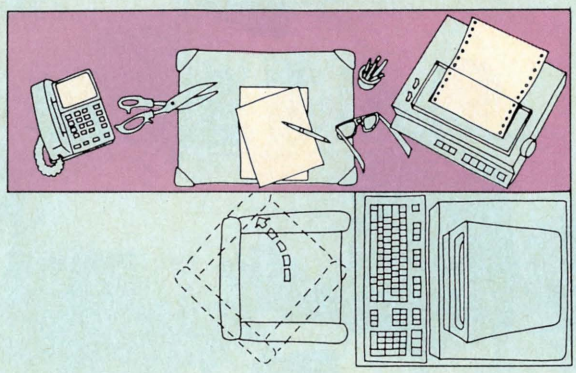
Desk height. Standard writing height of a work surface is 29½ inches, if you're going to be writing on it by hand. Standard typing height is 26½ inches, which happens to be exactly right for me. If you're building your work surface in, or if you're using an adjustable-height table or desk, determine your own best height by sitting in your chair and "walking through" your work motions. The proper typing height is the one at which your elbows are bent at a 90-degree angle when your hands are on the keyboard.

Desk space. Save at least 18 inches of workspace to the left and right of your keyboard. More is better. If your computer takes up about two feet, you need a desk five or six feet long.

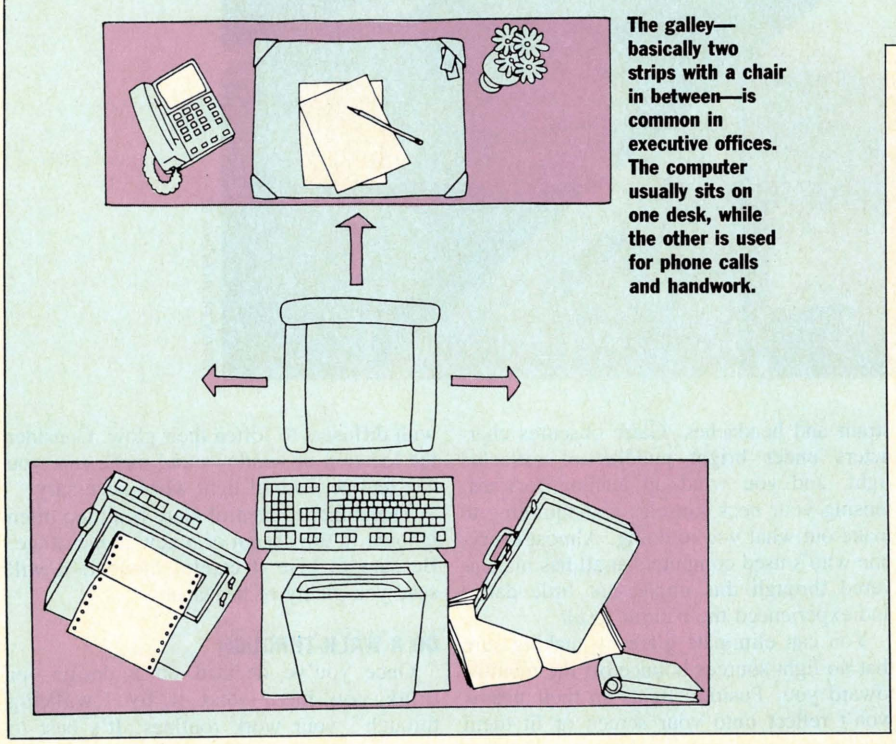
Don't forget, though, that we're all different. We do different work. We live in different spaces. We have different habits. We have different physical types. A well-designed home office meets our individual requirements for seating, work surface, and storage with particular solutions. Use these standards as guidelines, not gospel.

actually set up your furniture or cardboard cutouts on the floor, but I've found it almost as helpful to sit in front of the plans I've drawn and imagine myself working. It's important, though, that you physically go through the motions of reaching, turning, and working. Is everything smooth? Are locations convenient? Do relative positions make sense? Is the printer readily accessible but not in the way? Have you covered all your needs? Lighting? Work surfaces? Filing and storage space? Bookshelves? Equipment?

If you're like me, you'll run into at least a few problems. Once, I realized from the plans that a file cabinet tucked under my main work surface would keep me from scooting far enough to my left to conveniently operate my printer. So I modified the design to move the file cabinet. During my last redesign, I realized that I'd certainly kick my computer if I just set it on edge under my desk, so I built in another desk support behind which the machine could operate in safety.



L's are common home-office designs, because they make good use of wasted corner space and provide desk space for a printer or other equipment.



The galley—basically two strips with a chair in between—is common in executive offices. The computer usually sits on one desk, while the other is used for phone calls and handwork.

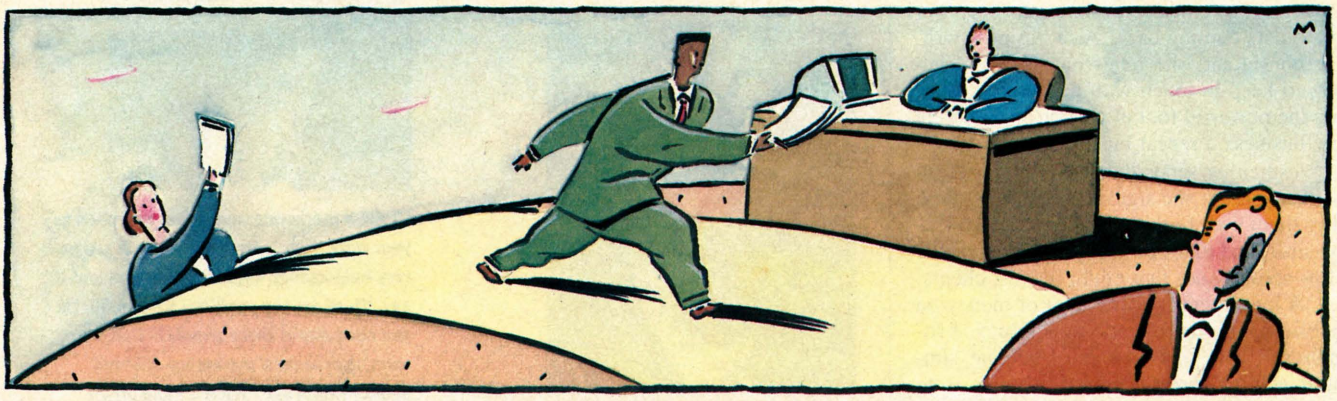
SUIT YOURSELF

Designing a home office should be a healthy and liberating exercise in pleasing yourself. Function is the key to a successful work space. Style has no practical value, but it can make you feel comfortable, energetic, and secure—and most people want to add a few personal touches to soften the stark utilitarianism of file cabinets and electronic gadgetry.

The most important thing about your home office isn't that it's at home, or even that it's an office. The most important thing about your home office is that it's *yours*. ■

THE BEST Ways to Keep Clients Coming Back

Building Repeat Business Is the Foundation for Success



BY RONNIE GUNNERSON

When the Chicago Transit Authority strike was in full swing a few years ago, so were the 45 maids who comprise Maid To Order. They rode to work in rented cars and jitneys. "We did not miss one day's work," boasts co-owner Coralee Smith Kern.

It's no wonder that turnover is an unknown word to Maid To Order clients. Coralee and her son, Kevin, have turned cleanliness into cash with customer service that a Fortune 500 executive would envy. They clip newspaper articles about their clients, many of whom are prominent community members, and send congratulatory cards when one reaches a milestone. They donate the services of an elegant butler-and-wait staff for clients' charity fundraisers. At Thanksgiving they send cards of appreciation to clients. They even have a hotline for both clients and employees, and they call themselves "the only service in town that lists the owners' home phone numbers."

One of 89 cleaning businesses in Chicago, Maid To Order may well be the best service in town. Founded 19 years ago, Maid To Order gets more than 90 percent of its business from satisfied customers who come back again and again.

The Kerns understandably value their customers; maid service is by nature a repeat business. Most people who hire cleaning services use the same one regularly, and few maids would be employed if they had to drum up new business week after week.

WHY YOU NEED REPEAT BUSINESS

Repeat business is the very essence of success for most small businesses. Attracting new business costs at least six times as much as retaining existing business, according to Carole Congram, editor of *The American Management Association Handbook of Marketing for the Service Industries* and president of Congram & Associates, a New York–based marketing consulting firm.

"People think it's sexy to get a new client," says Congram. "They forget about the people who have been with them for some time and who really value what they do."

Congram cites several reasons why business people should recognize the value of repeat customers. For one thing, it's simply easier to serve an existing client than a new one. "You have a working relationship going on," she says. Existing clients are sources of ideas for you and your company, and they even offer growth potential for you and your employees. You can cross-sell to them, which increases your own business, and your employees can expand their own experience on projects.

Suppose, for instance, that you are in desktop publishing. With your skills and equipment, you can also compose ads. But your desktop-publishing clients don't know that. Like all clients, they tend to pigeonhole you. Once you have a relationship with them, however, you have the chance to tell them about your other skills. And if they start using your service to compose ads, you are not only growing your business but are also providing opportunities for your staff.

Developing advocates for your business is another reason to focus on existing custom-

RONNIE GUNNERSON, *a contributing editor, has been a business writer for the personal computer and entertainment industries for the past eight years. She is the editor in chief of two newsletters for business executives and frequently writes the Business 101 department for* HOME-OFFICE COMPUTING.

ILLUSTRATION BY MARK MATCHO

ers, says Congram. "They make good referral sources and can serve as references as well," she says.

Possibly most significant, however, is the all-important bottom line. As Congram points out, "Your profitability picture increases because continuing clients represent continuing revenues and opportunity for improved profit."

Patricia Westheimer of Westroots Business Writing Systems in San Diego, California, quickly found that out. "I was told early that 80 percent of my business would come from 20 percent of my clients, and I didn't see how that would be possible. I thought that for a business to flourish, you had to get new clients. But, in fact, that's how it has worked out. The bulk of my business is repeat business."

STAY IN TOUCH

Westheimer may have initially been surprised, but she was smart enough to adopt strategies specifically designed to keep her customers coming back. As a business-writing consultant, she relies on notes and letters to keep in touch with her clients. "Using the powerful tool of writing, I have kept my business a repeat business," she says.

Westheimer sends thank-you notes to clients as soon as she signs a contract, remembers them with birthday and even anniversary cards, and mails newspaper and magazine clips about issues that might interest clients.

"A lot of people spend a lot of money on public-relations agents and fancy brochures," says Westheimer, "but the simplest way to generate repeat business is to keep in close contact with clients, and often the message can be simpler."

Occasionally, Westheimer sends gifts, but "they can be misinterpreted," she warns. "I gave Cross pens with my company name to clients, until a state official returned one, saying he wasn't allowed to take gifts. I felt terrible," she recalls. As a result, she relies even more on the written word, adding, "A note can be as powerful and memorable as an expensive gift."

Westheimer recommends newsletters as a potent way to keep in touch, especially since most homeworkers already have client databases in their computer files and can do mail merges fairly easily.

Keeping in touch is almost a religion to successful entrepreneurs with heavy repeat business. Like the Kerns and Westheimer, professional business speaker Patricia Fripp of San Francisco doesn't give her customers a chance to forget her. She, too, uses letters and phone calls to stay in touch with her clients, and she advocates another simple but often overlooked philosophy: Be as easy to do business with as you possibly can be.

SHOW COURTESY

Fripp left a 24-year career in hairstyling and product distribution to hone the speaking skills she had begun to develop during industry seminars. She became the first female president of the National Speakers Association and is now in her twelfth year as an entertaining business speaker. A keynoter at many conventions, Fripp has watched meeting themes change with the times. Based on those observations, she predicts, "The nineties will be the decade of the customer." As customer service becomes more important than ever, understanding your customers' businesses and problems will be the key to keeping their accounts, says Fripp.

Start by simply asking questions. Fripp, for instance, asks meeting planners for three topic suggestions when she is hired to give a speech. She incorporates those ideas into her presentation. This comforts her clients and helps foster a good relationship.

Adhering to her easy-to-do-business-with creed, she mails several pages of suggestions to planners, telling them how their investment in her services will pay off for them, then explains how to set up the microphone and arrange the audience. She even sends a checklist in advance to help them plan for her presentation.

Finally, Fripp always arrives early and lets the planners know she's there so they can rest easy. "If I am speaking at 7:45 a.m., can you imagine how they'd worry if I didn't let them know the night before that I'm in the hotel?"

ALWAYS MEET OR EXCEED CLIENTS' EXPECTATIONS

Courtesy like Fripp's is essential, agrees Suzanne Maricich, president of Suzanne Maricich & Associates, an advertising and

"Adopt the rule, 'Whoever answers the phone owns the problem.' In other words, when a client calls in, the person who answers the phone doesn't start passing the call along but takes responsibility for helping the caller. Sales is an attitude, not a department."

—Patricia Fripp, seasoned business speaker

"Keep in touch with your clients. Send thank-you notes for their business, clip relevant newspaper articles about topics of interest to them, send notes for special occasions in their lives."

—Patricia Westheimer of Westroots Business Writing Systems in San Diego, California

"When someone actually becomes your client, immediately reinforce the decision with a nice letter or an appointment for a planning session. You might even send a book or bottle of champagne with a note saying that you are looking forward to a constructive working relationship."

"A key point in keeping the customer is to go back in and talk about the benefits the client has received as a result of the work you have done. Even put together a little annual report of projects you have completed."

"Take a marketing, not sales, approach to your work. Here's the difference: A temporary-help agency might come to you and say, 'Here are the positions we can fill. Do you need any of these people?' That's a sales approach. A marketing-oriented agency would say, 'What's happening? What kind of challenges are you facing? We can do that.' "

—Carole Congram, editor of* The American Management Association Handbook of Marketing for the Service Industries *and president of Congram & Associates, a marketing and communications consulting firm

"Don't use other clients as an excuse for not meeting your obligations to your customer. It isn't your customer's fault that you have too much business and can't handle it all. Your client wants the job done."

"Meet deadlines. Plan to finish 24 to 48 hours ahead of schedule so you are certain to meet the actual deadline. If you know during the initial meeting with a prospective client that you cannot meet the projected deadline, tell the client up front. You may lose the contract if the deadline is inflexible, but you will preserve your reputation."

"Sometimes the person you work with isn't the decision maker. Be sure to meet the decision maker, and when you complete a project, make sure the benefits of your work are known not just to the person you work with but to the person who ultimately passes judgment."

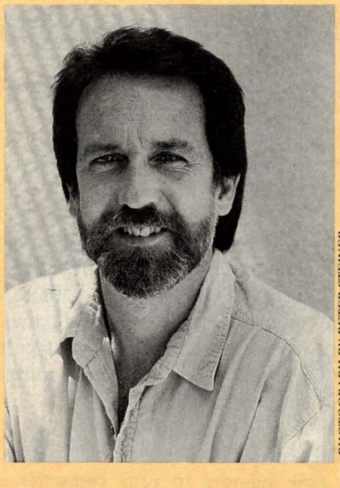
—Suzanne Maricich, president Suzanne Maricich & Associates, advertising and communications marketing firm

"Don't burden your customers with technology. Just because you use a computer doesn't mean you have to tell them exactly how you use it. You may still be fascinated with your desktop-publishing software, for example, but most customers will be overwhelmed. They want the finished product, not a blow-by-blow description of how you made that product. But if they are interested, share your knowledge."

"The first rule of customer service begins with you. Be honest with yourself up front when you price and schedule a job. Factor in Murphy's Law: If something can go wrong, it will. And if it does, don't throw the blame all over the place. Take responsibility and correct it at no cost to the client."

"Become a human resource to your client. Share your expertise."

—Tom Cross, Tom Cross, Inc., ad agency



PHOTOGRAPH BY PETER STEINER

marketing communications firm in Seal Beach, California. But she goes a step further by stressing the quality of the work itself. No matter how you excel at customer relations, you will lose the client if your work isn't first-rate.

"Your work must be outstanding," says Maricich. "It should be accurate, and no matter what kind of work you are providing, it should be clean and neat as a pin. Remember that quality is part of what is said about you when your name is mentioned, and word of mouth is extremely important."

Your work must at least meet or exceed all of your client's expectations, says Maricich. To achieve that, be sure to define those expectations at the outset.

"Find out the client's goals, and put as many expectations as possible into a contract," advises Maricich. "If you sense your client's expectations are unrealistic, the initial meeting is the time to discuss that," she says.

There should be no surprises for the client as you proceed on a job, warns Maricich. Provide a written estimate in the beginning and include an escape clause so that if specifications change, your client understands that costs and deadlines could change. And if they do, inform your client verbally, and follow up immediately with a letter.

ALWAYS BE DIPLOMATIC

No matter how frustrating a job gets or how overloaded you are, do not complain to your clients about being overworked, Maricich advises. "That's not their problem. Be a good trooper, and be a positive force for your client."

If you have to convey bad news, which consultants sometimes do, "deliver it with diplomacy," she says. Market research may turn up unexpectedly unpleasant facts, for instance. The best you can do then is to offer alternative solutions and "make sure you are on your client's side," says Maricich.

Building relationships is what repeat business is ultimately all about. As Congram states in her marketing handbook, "Customers involved in long-term relationships are hard to lose."

Illustrator Tom Cross can attest to that. He and his partner and wife, Patti, consider themselves human resources and believe in working as a team not just with their clients but even with their competitors. Their philosophy has led not just to repeat business but to an entirely new business.

The Crosses, who tout Tom Cross, Inc., in Osprey, Florida, as an ad agency whose client is the environment, recently created the first official publication of the Environmental Protection Agency's National Estuary Program for the Sarasota Bay Project in Florida. The entire publication, which contained more than 100 pieces of artwork, was published electronically by the couple. Their willingness to share their desktop-publishing expertise has resulted in a three-way "partnership" with their printer and a recycled-paper company to create a promotional piece for the printer that will include credits citing both Tom Cross, Inc., and the paper manufacturer.

The Crosses are being paid to oversee the project, but they have logged 60 to 80 hours of unpaid time working with the printer's production manager. "What we have learned is invaluable," says Tom. "If you are willing to turn off the meter sometimes when you are dealing with other professionals you depend on, you will learn a lot, which will in turn lead to more business."

Sharing their expertise with their clients, on the other hand, has added a new line of work to their dossier. Tom has become a desktop-publishing consultant for clients who decide to take their design business in-house. Granted, it may have been the Crosses' openness about their work that motivated clients to take the business away from them, but it was that same honesty that inspired those clients to turn back to the Crosses for training and support. And so a new sideline was born to Tom Cross, Inc.—giving the concept of repeat business new meaning—and confirming the value of the relationship.

As Patricia Fripp says, "You make money by making a transaction. You build a business by building relationships."

Perhaps the real key to building those relationships lies in the words of Suzanne Maricich: "Be friendly but professional. Keep your performance and communications businesslike, but give your customers the respect and attention you give your friends." ■

THE BEST Ways to Squeeze More Out of Your MS-DOS Computer

It's Easier and Cheaper Than You Think to Boost Your Power, Performance, and Productivity. Here Are 25 Ideas from $1 to $2,000.

BY DANIEL GROTTA

Every month, HOME-OFFICE COMPUTING hears from readers who want more of everything from their computers: more speed, memory, and power, more hard-disk capacity, easier-to-use interfaces, better graphics.

You're not one of these people, you say? Well, maybe you should be. Our suggestions for supercharging your total computer system can help you do your work more quickly, easily, and safely—and even postpone or eliminate the day when you say "I need a new computer."

What follows is a collection of some of the best ways we know of to enhance your present MS-DOS computer system. We've separated our suggestions into seven (occasionally overlapping) areas: time-savers, hard-disk speed, storage capacity, three peripherals always worth adding, hiding DOS, learning, and computer speed.

Some of the suggestions mentioned here are inexpensive enough to implement without a second thought; others cost thousands of dollars. In general, hardware solutions are more expensive than software. Most you can install and configure yourself, but a few—particularly those in the "How to Speed Up Your Computer" section—might best be done by a trained technician or computer consultant. The beauty of these items is that you can purchase any of them as your budget allows, and you'll almost certainly improve some aspect of your computer's performance or productivity.

DANIEL GROTTA, *a Pennsylvania-based author, reviews products and writes features for several computer publications.*

SAVING TIME

1. Add memory to your computer. Most 286- and 386-based computers come equipped with 1MB of RAM, which is adequate for many users. But additional memory is indispensable for running some of the newer programs or for program switching under SoftLogic Solutions' *Software Carousel* or multitasking under Microsoft *Windows* or Quarterdeck's *Desqview*.

Additional memory is also useful for setting up what is known as a disk cache, a technique of increasing speed of access to the contents of hard or floppy disks (*see suggestion 6 below*).

Many computers' motherboards have empty sockets into which RAM chips or single in-line memory modules (SIMMs) can be inserted. You can buy RAM chips or SIMMs at your local computer store or purchase them by mail and save some money. If your computer's motherboard can't accommodate additional RAM, a number of companies (AST, Boca Research, and Intel, for example) supply memory-add-on cards that go into empty expansion slots. (Thirty-two-bit computers have proprietary slots; you would buy your memory-expansion board from the manufacturer of your computer.) Prices for RAM chips and SIMMs fluctuate daily and vary according to the speed of the chips themselves. The current price of 1MB SIMMs (by mail) is $90 to $125.

2. Use a print buffer or spooler and work while you print. A print buffer, such as the Microbuffer from Practical Peripherals ($99 to $299), is a hardware device that plugs in between your computer and printer. When you print a file, the data goes immediately to the buffer, which feeds it to the printer at the proper pace, leaving your computer free to do other work. Buffers vary in capacity; the largest (and most expensive) can hold more than 100 pages of text or the equivalent. Although most printers today have built-in buffers, they are usually small, holding between 1 and 10 pages of text. Internal buffers from some manufacturers' impact printers, Okidata's, for example, can be expanded. Although this may be more expensive than buying a stand-alone buffer, it eliminates an additional box on your desk. Laser printers use RAM to generate the images they print; upgrading a laser printer's RAM has the same effect as adding either a

spooler or a hardware buffer.

Print-spooling software, like LaserTools' *PrintCache* ($149), turns part of your computer's RAM into a print buffer, doing the same thing as a hardware buffer for a lot less money—assuming that your computer has enough memory to hold large print files and run your application software at the same time. (If your system has 256K or more of extended or expanded memory, you'll be able to set up a generous spooler.) An advantage of print spoolers is that you can make the spooling buffer as large as you need. Some disadvantages are that you may not be able to pause or cancel printing once you've begun or specify multiple copies, as you can with some hardware buffers, and, finally, spoolers often slow down your computer's operation until printing is finished.

Spooling software is available at prices between $35 and $150. One package you might want to take a look at is Multisoft's *PC-Kwik Power Pak* ($130), which combines a print spooler, a screen saver, a keyboard accelerator, and a disk cache. Some computer manufacturers (like AST) supply spoolers free with their systems.

3. Put more zip into your cursor movement by adding a keyboard accelerator. Advice for fast typists: A keyboard accelerator, like *Cruise Control* ($60 from Revolution Software) allows you to increase the velocity of your cursor from the poky standard speed to as fast as you like; there's no more waiting around for the cursor to reach the intended character or position. *Cruise Control* also includes a screen saver, which automatically dims your monitor when your computer is inactive. (*PC-Kwik Power Pak*, mentioned above, also provides a keyboard accelerator.)

4. Make one key do the work of many with keyboard macros. If your applications don't offer macros (most do), invest in a macro program. Keyboard macros are a kind of computer shorthand with which users can store a number of keystrokes—a few or hundreds—in a little file that is activated or played back by a particular key combination. (*WordPerfect*, for example uses combinations of the Alt key and alphabetic keys to store and play back macros.) Macros can be used to input words, sentences, or entire paragraphs or pages of boilerplate text. Or you might create a letterhead macro to print your name, address, and phone number, centered and boldfaced. Macros can also be used to automate strings of commands. Most sophisticated application programs nowadays have macro capabilities built in. For those that don't, a program like Alpha Software's *Keyworks* ($99) will fill the gap.

5. Instantly switch among several programs that you use regularly. Just as someone accustomed to color television would find it hard to go back to black-and-white, once you've used program-switching software like SoftLogic Solutions' *Software Carousel* ($90) or Helix Software's *Headroom* ($130), you'll never again settle for running just one program at a time. Program switching permits the user to move instantly among two or more programs simply by touching a couple of keys. For example, you could access your database while in the middle of writing a report with your word processor or switch to DOS to format a floppy disk without closing and exiting the spreadsheet you're working on. The catch is that you must have enough memory in your computer to hold all the programs you want to work with. Two megabytes of RAM should suffice to work with three or four packages at once.

IMPROVING YOUR HARD-DISK DRIVE'S PERFORMANCE

6. Speed up disk operations two to three times by installing a $70-to-$100 disk-cache program. Disk caches have been used for years on mainframe computers to speed up hard-disk operations—the hard disk being the slowest part of the system. What a disk cache does is record in a special chunk of RAM all the data that software accesses from the disk. It is statistically likely that this data will be used over and over while the current task is being completed, and it can be accessed many times faster in RAM than from the disk. Programs like *Super PC-Kwik* from Multisoft ($80), *Power Cache Plus* from Intelligent Devices ($99), or *Flash* from Software Matters ($70) do this for your PC.

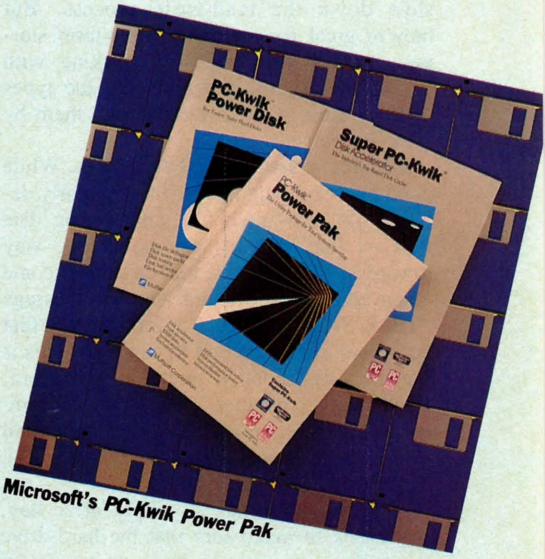
Like several other performance-improvement options reviewed here, disk caches take up RAM. Up to a point (about 256K), the bigger the cache, the better it works.

7. Speed up disk reads and writes by defragmenting your files. DOS writes data on a disk wherever it finds room. It starts writing in the first empty space it finds; if that isn't big enough to hold the whole file, it jumps to another empty area and continues. This may happen several times in the writing of a given file. When the time comes to read the file, the read-write head has to jump around all over the disk to find the data, which, naturally, slows down reading. When data for a given file is written in contiguous tracks and sectors (all in one place), however, reading is significantly faster. Defragmenting programs like *Disk Optimizer* ($70 from SoftLogic Solutions) are safe, easy-to-use utilities that physically put all your fragmented files back together again (a feat all the king's horses and all the king's men couldn't accomplish with Humpty-Dumpty). *Norton Utilities*, *Mace Utilities*, and *PC Tools* all include defragmenting modules. You should defragment your files every month or so for maximum effectiveness.

8. Speed up your hard disk's performance by optimizing the interleave factor. The interleave factor is the number of revolutions required for a full track (band) of data to be read from or written to your disk. The faster a system's "throughput" (data transfer

Intel Above Board Plus

Practical Peripherals Microbuffer



Microsoft's PC-Kwik Power Pak

speed), the closer it can get to uninterrupted reading or writing (a 1:1 interleave). It's not at all unusual for a hard-disk drive to be set up at the factory or dealership with unnecessarily large interleave factors (2:1, 3:1, or more). *SpinRite II* ($89 from Gibson Research), among other things, tests a hard disk and determines the optimum interleave. If the program finds that the interleave can be improved, it will (in a one-time operation) actually relocate all the data on your disk to achieve the optimum interleave and, hence, the fastest possible read-write time. If you are able to improve your hard drive's interleave factor, you will have permanently boosted your whole system's performance.

SpinRite's primary purpose is rewriting the disk's low-level formatting and checking the disk surface for flaws and defects. These functions don't improve performance, but they do increase the reliability and overall health of your hard disk dramatically. Running *SpinRite* may take anywhere from a couple of hours to overnight, depending on the capacity of your disk.

INCREASING YOUR COMPUTER'S STORAGE CAPACITY

9. Use a data-compression system to compact your data. A brand new firmware product, Expanz! ($199 from InfoChip), compresses data (lets the "air" out) as it writes it to your hard- or floppy-disk drive (and, naturally, decompresses as it reads). Depending on the specific type of file, you get anywhere from 2 to 10 times the amount of data on all your disks. Expanz!, an 8-bit expansion card (with software), currently works only with DOS 3.X; a future version will support DOS 4.X.

If you don't want to spend that much, there are several software utilities—like *Cubit* ($70 from SoftLogic Solutions), *ARC* ($50 from System Enhancements Assoc.), or *PKZip/PKUnzip* ($47 from PKWare)—that do the same sort of thing. The drawback to using these packages is that they slow down the read-write process. But they're great for archiving: long-term storage of files you won't be working with frequently. Again, depending on the types of files, these packages can shrink them by 10 to 90 percent.

10. Add a second hard-disk drive. While good housekeeping habits (like regularly deleting old, unwanted files and storing data files on floppy disks) can go a long way toward postponing it, the day may come when you are confronted with the message "DISK SPACE FULL," informing you that your hard disk is packed to capacity. This is not the catastrophe it might at first seem, since many computer systems can accommodate a second hard-disk drive. New hard drives range in price from $250 to $2,500, depending on capacity and speed.

If your system has an empty drive bay, just check to make sure that the hard-drive controller can operate two drives (most can), and select a drive that fits the bay (probably half-height) and uses the same type of controller. Installation involves sliding the drive into the empty bay and fastening it in place, plugging in the controller cable, ground wire, and power connector, and formatting the drive. If you're not comfortable with the idea of messing around with the innards of your computer, pay a technician to do this.

If no drive bay is available, an external hard-disk drive is your best bet. External drives are slightly more expensive. If you have an empty expansion slot, a hard-drive card (which incorporates its own controller) is another, substantially more expensive, alternative.

11. Expand storage almost infinitely by adding a $580-to-$2,500 removable cartridge or hard drive. With a Bernoulli Box ($950 to $2,500 from Iomega Corp.), which uses 10- or 20MB removable disk cartridges, or a 10- to 40MB removable hard drive like Plus Development's Passport (20MB, $750; 40MB, $875) or Tandon's Add Pac ($580), you can store limitless amounts of data, just as you would on floppy disks.

MAKING DOS FRIENDLIER

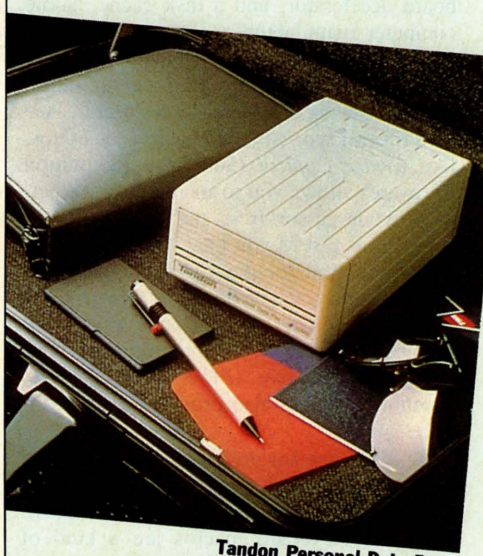
12. Hide under a DOS shell. Similar in some ways to GUIs (*see below*) are DOS shells, like the *Norton Commander* ($149 from Peter Norton Computing) or *XTree Pro* ($39 from the XTree Company). These utilities sit between the user and the dreaded operating system, using simple English words and phrases and tree diagrams to display all sorts of disk and file information—subdirectories, files, amount of RAM and disk space left—and simplify execution of standard DOS file-management commands like Dir(ectory), Delete, Copy, and Print. They also add commands not available in DOS, like Move and View. In addition, the products mentioned speed up DOS file operations considerably, especially on user-selected groups of files.

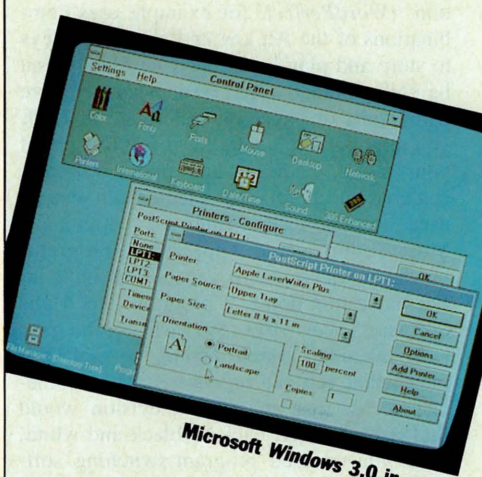
13. Use a graphical user interface (GUI) and forget about DOS. A GUI—like Microsoft *Windows* 3.0 ($150) or Tandy's *DeskMate* ($100)—replaces DOS's unfriendly, difficult-to-remember command structure with an easy-to-understand visual point-and-shoot system. GUIs use icons (pictures) to represent application programs and system functions. Just click with the mouse to launch or execute. The best-known GUI, *Windows*, had a reputation for being slow and limited, but the latest version, 3.0, answers most users' complaints. Many industry analysts think that it will quickly supplant DOS as the preferred user interface.

THREE PERIPHERALS NO ONE SHOULD BE WITHOUT

14. Buy a modem; if you already have one and you use it a lot, upgrade to a 2400-bit-per-second (bps) modem. Modems ($60 to

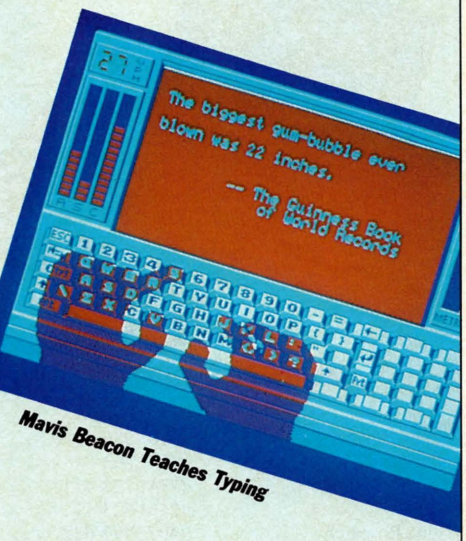
SpinRite II from Gibson Research


Tandon Personal Data Pac

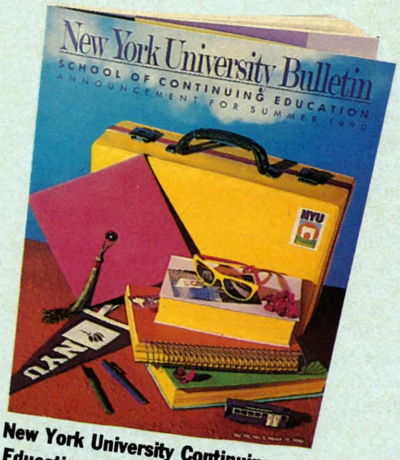


Microsoft Windows 3.0 in action

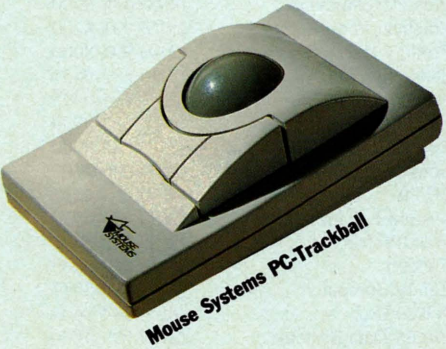
Everex 2400-bps Modem



Mavis Beacon Teaches Typing



New York University Continuing Education Catalog



Mouse Systems PC-Trackball

$200 from companies like Practical Peripherals, Hayes, and Everex) let you send and receive files to and from another computer—across the street or a continent away. A modem also gives you access to the extremely useful commercial dial-up information service/databases like CompuServe, Prodigy, and Delphi. In addition to information gathering, these provide access to shopping, telecommunications (electronic mail and faxing), airline schedules, and bulletin boards of all kinds.

When coupled with a powerful memory-resident dialing program like *HotLine* ($99 from General Information), your computer and modem can function as a sophisticated autodialer and create and manage a telephone database that can store information about thousands of clients, customers, or business contacts.

Modems come in internal and external versions. An internal modem fits in an expansion slot on your computer's motherboard; the external type is a small box that sits on your desk (most will sit under your phone) and has its own power supply. The faster your modem transmits and receives data, the less time you'll spend uploading and downloading information and the less money you'll spend on phone bills. For the majority of users a 2400-bps modem is the most cost-effective choice. If you use an hour of connect time each month at 1200 bps, the money you save from switching to 2400 bps will pay for the modem in less than a year.

15. Add a mouse or track ball to your system. Mice were spawned by graphical user interfaces (GUIs) like *Windows*; they are an integral part of the concept. But these palm-size pointing devices ($35 to $135) have also been incorporated into the workings of a number of important software packages (*Ventura Publisher*, *Word*, and *Excel*, for example) that don't necessarily require a GUI to work—primarily to speed operation and simplify learning. Popular mouse manufacturers are Logitech, Mouse Systems, and Microsoft.

Track balls are a recent redesign of the mouse. The track ball remains stationary on the desk (thus requiring less desk space than a conventional mouse), and the cursor is controlled by a ball that the user manually rotates. The question of which is better, mouse or track ball, is purely a matter of personal preference.

16. Move up to VGA, the current PC display standard. A VGA display system makes working at a computer screen for long periods much easier to endure, since it displays sharper, easier-to-read text and graphics than earlier types of screens. If your system is equipped with an EGA display, it's probably not worth trading up (the improvement in display quality isn't *that* great), but if you've been working with a CGA setup, run, don't walk, to your dealer. Paradise, Headland, and Boca all manufacture high-quality VGA cards; we recommend coupling the boards with a Zenith ZCM-1492 or a Magnavox 8CMO82 VGA monitor or else a multifrequency monitor from NEC, Seiko, or Sony.

Actually, aside from the question of display quality (important as that is), more and more software packages are being released that require VGA in order to work properly.

LEARNING ALTERNATIVES

17. Take a trip to the bookstore. Reading computer documentation is an almost guaranteed cure for insomnia. Most instruction manuals and workbooks that accompany equipment and software are dry and dull, confusing and contradictory—which explains why there's such a brisk market in independently published how-to books for computer users. If you are having difficulty mastering *Word* or *WordPerfect*, DOS or *dBase*, take a trip down to your local bookstore and pick from among the many handbooks in the computer section. Usually, computer books from major publishers are better written, more thorough, and easier to follow than the documentation that comes with your program.

18. Learn about computing in front of your computer—with a disk-based tutorial. These programs-to-learn-programs—which cost from $1 or $2 for public-domain disks to $130 or more for commercial training software—sit you down in front of your own computer and lead you through a question-and-answer, follow-by-example learning session. Learning disks aren't limited to mastering computer software, but can and do teach things like touch-typing or designing a newsletter. The biggest publisher of disk-based tutorials is the American Training Institute (ATI).

19. Learn software thoroughly by taking an inexpensive, once-a-week class. Many computer stores, high schools, colleges, and Y's offer regular courses—some even for academic credit—for learning specific programs, like *WordPerfect, PageMaker*, or Lotus *1-2-3*. These courses are usually effective and relatively inexpensive—certainly better than trying to learn on your own. One caveat is that such classes are sometimes overcrowded, with several students sharing a computer.

20. Learn a complex program in just a few hours by attending an intensive, hands-on session with a professional trainer. There are scores of computer consultants and professional software-training firms that conduct one- or two-day seminars at hotels, motels, business centers, or their own classroom facilities throughout the country. Everything you need—computer, software, instructional aids—is provided. Many business firms send their employees to these kinds of training sessions regularly. While they can be expensive—$200 to $700 a day—it's money well spent if you need to master a particular program or technique in as short a time as

possible. You can find them in the business-to-business yellow pages under computer consulting or computer training, or by looking at the ads in your newspaper's business section. Some training companies of national scope are AT&T, Egghead, ExecuTrain, and PC Etcetera.

SPEEDING UP YOUR COMPUTER

21. Turbocharge your computer's main input device (that's you) by learning to type. Despite all the concern—bordering on obsession—with the speed of the equipment we use, the fact is that most of the time, our computers sit around waiting for us to give them work to do. Becoming a competent typist is perhaps the single best way of getting more out of your computer.

Typing classes are available at both public schools and business-training institutes. Then, of course, there are numerous published typing courses. But since you're going to be typing on a computer, why not use one of the several computerized typing tutors? Three of the most popular programs are *Mavis Beacon Teaches Typing* ($50; Software Toolworks), *MasterType* ($40; SVE), and *Type!* ($27; Broderbund).

22. Get amazingly fast performance with certain software by installing a math coprocessor. This $100-to-$500 auxiliary microprocessor designed specially for numerical calculations will speed up the operation of calculation-intensive software. Depending on the specific application, the speed improvement will be anywhere from modest to dramatic. Virtually all spreadsheets, databases, accounting, financial-analysis, and statistical-analysis packages and quite a number of graphics and typographical programs will run up to five times as fast with a coprocessor.

Virtually all computers nowadays have slots for a coprocessor, usually right next to the main microprocessor chip. The specific coprocessor for your computer depends on the identity of its main processor. Computers based on the 8088 and 8086 take the 8087 coprocessor; 80286 computers require the 80287 chip; 80386 computers call for the 80387. Coprocessor chips are available with different clock speeds; the faster chips cost more than their slower equivalents. Those of you with i486-based computers already have math coprocessors; one is built into each 486 chip.

If you're in doubt as to whether a coprocessor would speed up your work, Intel, the company that makes the coprocessor chips listed above, will cheerfully provide a list of programs that are compatible with and benefit from their math coprocessors.

23. Rejuvenate your older computer by adding a speedup board. Want to run your applications on your PC or XT compatible two to three times faster? You can achieve improvements of this magnitude by installing a $200-to-$350 accelerator board manufactured by Intel, SOTA, Orchid, or Cumulus. If you want to accelerate 5, 8, or 10 times faster, you can upgrade your 8088 or 80286 computer with a $600-to-$1,000 80386 accelerator board. The 80386 gives the added benefit of compatibility with the latest generation of 32-bit software just coming onto the market.

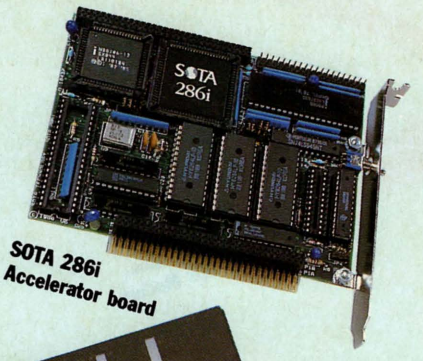
Buying a new computer with a faster, more powerful CPU is probably preferable, but if you need the speed boost and 32-bit compatibility and can't afford a new system, an accelerator board is a practical compromise. The downside of adding an expensive accelerator board is that your computer still operates through its original motherboard, RAM, and peripherals, so you won't get any extra performance at all when it comes to hard-disk-drive access. Therefore, if your primary software application is a disk-intensive program, like a database, you may not notice a significant speed increase.

24. If you refuse to retire your venerable (but sluggish) XT compatible, switch to a faster microprocessor (CPU). At the root of the MS-DOS family tree is the PC- and XT-type computer's 8088 microprocessor chip, which ambles along at a poky 4.77 MHz. If you aren't willing to kiss your old 8088 goodbye, crack open your computer, locate and remove that 8088 from the motherboard (it's a large, rectangular chip, about 2 by ½ inches), and replace it with Intel's 8088-2 or NEC's V20 microprocessor. These $10-to-$15 chips are 100-percent compatible with the 8088 and will increase speed by 10 to 80 percent.

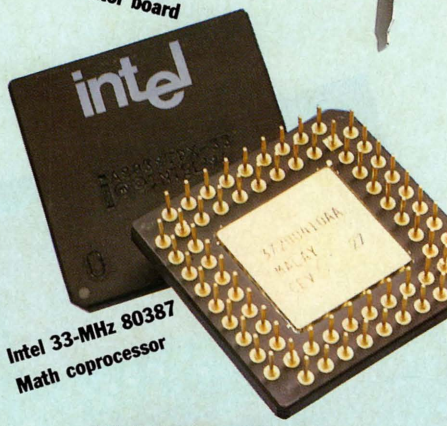
25. Replace your computer's motherboard with a new 80386-based motherboard. This option is for people who like a challenge and aren't daunted by the innards of computers, who know what a power connector looks like, and who are willing to do their own troubleshooting. A new motherboard uses your old case, power supply, and peripherals. Several companies, like Hauppauge, American Megatrends, and JDR Microdevices, manufacture replacement motherboards that feature newer, more advanced CPUs, larger memory capacity, and faster data and input/output buses. To replace a motherboard—they range in price from $150 to $2,000—you'll need some tools, the knowledge and ability to follow terse directions, and lots of patience. You might choose to pay a technician to replace the motherboard for you.

MIX AND MATCH

This list by no means exhausts the possible ways of getting more out of your computer and peripherals. But we're reasonably certain that computer users will be able to find at least one or two tips here to make their work a bit more pleasant and productive. We hope that all of you will try some of our suggestions. If any of our tips work particularly well for you (or if you have criticism or advice on any of our suggestions), let us know. ■



SOTA 286i Accelerator board



Intel 33-MHz 80387 Math coprocessor

MANUFACTURERS

Alpha Software	(818) 986-4110
American Megatrends	(404) 263-8181
AST Research	(714) 727-4141
ATI	(213) 823-1129
Boca Research	(407) 997-6227
Broderbund	(415) 492-3200
Central Point Software	(503) 690-8090
CompuServe	(614) 457-8600
Delphi	(617) 491-3393
Easysoft	(404) 992-4140
Fifth Generation Systems	(504) 291-7221
General Information	(206) 483-4555
Gibson Research	(714) 830-2200
Hauppauge Computer Works	(516) 434-1600
Hayes	(404) 441-1617
Headland Technology	(415) 623-7857
Helix Software	(718) 262-8787
InfoChip Systems	(408) 727-0514
Intel Corp.	(503) 696-8080
Intelligent Devices	(714) 920-9551
Iomega Corp.	(801) 778-1000
LaserTools	(415) 420-8777
Magnavox	(615) 521-4316
Microsoft	(206) 882-8080
Multisoft	(503) 644-5644
NEC	(708) 860-9500
Okidata	(609) 235-2600
Orchid Technology	(415) 683-0300
Paradise Systems	(415) 960-3360
Peter Norton Computing	(213) 319-2000
PK Ware	(414) 352-3670
Plus Development	(408) 434-6900
Practical Peripherals	(818) 991-8200
Prodigy Interactive Service	(914) 993-8000
Quarterdeck	(213) 392-9851
Revolution Software	(201) 455-0995
SoftLogic Solutions	(603) 627-9900
Software Toolworks	(818) 885-9000
Sony Corp.	(201) 930-1000
SOTA	(408) 263-4411
System Enhancements	(201) 694-4710
WordPerfect Corp.	(801) 222-4020
Tandon	(805) 523-0340
Tandy Computer	(817) 390-3011
XTree Co.	(805) 544-0604
Zenith Data Systems	(312) 699-4800

THE BEST Business Resources

Associations • Electronic Networks • Business-to-Business Services • U.S. Government • Newsletters and Publications • Directories and Catalogs • Books

BY CHARLOTTE PIERCE

Someone once asked Sally Rand, the famous fan dancer who saved the 1930 Chicago World's Fair from bankruptcy with her publicity stunts, for the secret of business success. "It never happens by itself," she replied. "You must make it happen."

In order to make success happen, you must have the necessary resources at your fingertips. As a solo CEO or partner in a home-based business, you may not have a financial officer, production manager, attorney, or corporate travel service down the hall, but you can reach to experts, books, associations, and other resources that are ready to give you support and advice, to help you find operating capital—and to help you avoid costly mistakes.

Although there seem to be as many resources as there are readers, we've selected some favorites in the hope that you'll use this guide as a starting point for building your own individual support network.

CHARLOTTE PIERCE, *a home-based freelance writer, has been gathering and evaluating business resources for the past two years. She welcomes recommendations of favorite resources from readers and can be reached on CompuServe* (ID74730,3114), *MCI Mail* (ID380-3387), *or in care of* HOME-OFFICE COMPUTING.

BUSINESS MANAGEMENT & SUPPORT

American Association of Professional Consultants, 9140 Ward Parkway, Kansas City, MO 64114; (913) 648-2679. William Steinhardt, executive vice president. Annual membership fee is $195; $160 to renew.

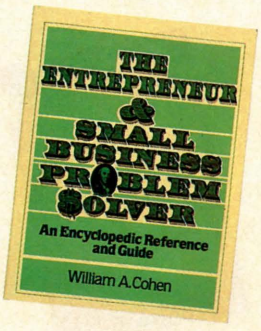
Whether you're a practicing or aspiring consultant or just need a free referral to one, the AAPC is an up-and-coming organization that can give you a boost.

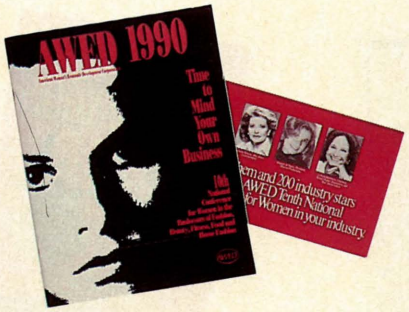
Among AAPC services are a Registered Professional Consultant (RPC) designation course, seminars, books, and cassettes on consulting in the fields of management, technology, and engineering. Regional meetings feature well-known speakers and consultants. AAPC will hold a meeting on the East Coast in October, a November conference in Los Angeles, and a spring 1991 conference in Chicago (call for dates and seminar schedules). Group insurance plan is available.

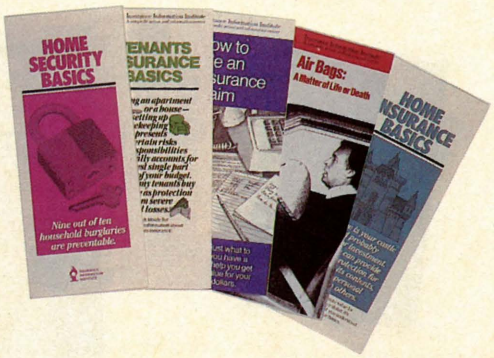
American Management Association, 135 W. 50th St., New York, NY 10020; (212) 586-8100. Thomas R. Horton, chairman and CEO. Annual membership fee is $125.

AMA gives more than 3,000 public seminars worldwide each year on all major aspects of business management. Members receive a monthly newsletter, telephone support, library services, and discounts on books and publications. Major 1990/91 events include PackExpo, a conference on product packaging, November 11-13, 1990, in Chicago; and the Human Resources Conference, April 14-17, 1991, in Orlando, Florida. Group insurance is available.

American Marketing Association, 250 S. Wacker Drive, Chicago, IL 60606-5819; (312) 648-0536. Jeffrey Heil-







brunn, president. Annual membership fee is $65.

There may not be a better mousetrap, but there's usually a better way to sell a mousetrap! You might find that out at the AMA's annual national conference or at one of the association's periodic meetings at more than 400 local chapters, featuring targeted seminars and well-known speakers. Members also receive a directory of nearly 30,000 professional and executive members in the fields of advertising, sales, sales management, retail sales, and education. Additional member services include an information center, on-line data search, and telephone support.

American Women's Economic Development Corporation, The Lincoln Building, 60 East 42nd Street, New York, NY 10165; (212) 692-9100.

If you have a tough business question and need an answer fast, the experts at the AWED/Citibank counseling hotline, (800) 222-2933, or (800) 442-2933 in Alaska, Hawaii, and New York ($10 for 10 minutes or $35 for an hour and a half with prepared questions), may be able to help. AWED has trained more than 96,000 women in how to start and run businesses. The 1991 conference for business women takes place at New York's Jacob Javits Center, March 23. AWED also publishes *Woman Entrepreneur* newsletter.

Consultant's National Resource Center, P.O. Box 430, Clear Spring, MD 21722; (301) 791-9332. Stephen Lanning, executive director. Membership is free.

CNRC can help boost your business—whether you are a consultant in search of work or a business owner in search of an expert. For nearly 10 years, CNRC has been very active in the distribution of resource materials and the enhancement of the consulting profession. Publications include the information-packed *Consulting Opportunities Journal* and an extensive catalog of books, periodicals, software, and other resources for consultants and small-business owners.

Direct Marketing Association, 11 West 42nd Street, New York, NY 10036-8096; (212) 768-7277. Annual membership fee is from $495 to $23,000 depending on size of company and sales volume.

In addition to helping you run successful direct-mail and direct-marketing campaigns, the DMA runs a Mail Preference Service that helps individuals and small businesses reduce the volume of unwanted advertising mail they receive by having their names removed from national mailing lists. Related services include Telephone Preference Service and the Mail Order Action Line, which provides help to those with unresolved mail-order transaction problems. Other member services include *Directions*, a monthly magazine, other books and publications, and regular conferences and workshops.

Insurance Information Institute, 110 William Street, New York, NY 10038; (212) 669-9200. Toll-free business and consumer hotline: (800) 331-9146. National Consumers' Helpline: (800) 942-4242. Funded by more than 300 member companies in the insurance industry.

If you need help with minimizing costs and maximizing protection on your business and/or personal insurance, the staff at III will confer with you over the telephone or send you free publications, including a *Guide to Services* which features member insurance companies, related associations and a directory of field offices.

International Franchise Association, 1350 New York Avenue NW, Suite 900, Washington, DC 20005; (202) 628-8000. Membership fee is based on franchise sales.

Join the IFA, and you belong to the same club as the CEO of McDonald's—and more than 800 other franchisors. If you want to learn more about the opportunities in franchising, consider attending one of the following events: The World of Franchising Expo, Chicago, September 8–9; the IFA Legal Roundtable, Chicago, September 10; the Annual Marketing Seminar, Chicago, September 11-12; the Franchise Sales Seminar, Chicago, September 12-13; the World of Franchising Expo, Atlanta, October 27-28; the IFA's Annual Meeting, Miami Beach, Florida, February 10-13. Publications include the bimonthly *Franchise Opportunities*, and the *Franchise Opportunities Guide* (membership directory).

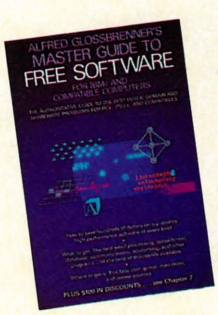
"The International Franchise Association has proved to be one of our most valuable resources," says Bernie Browning, chairman of General Business Services and IFA Hall of Fame member in Bethesda, Maryland. "Over the years, our membership has given us the chance to go to seminars and meetings where we could share experiences and common problems with other franchisors. Even if they're not in the same niche, there are some challenges all franchisors face."

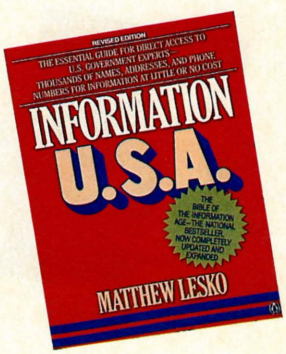
National Association for the Cottage Industry, P.O. Box 14850, Chicago, IL 60614; (312) 939-6490 or (312) 871-4900. Annual membership fee is $45.

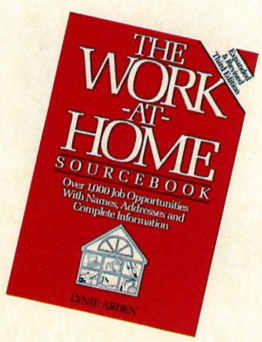
Coralee Smith Kern, the NACI director and a tireless national home-business activist, also finds time to run a million-dollar, home-based business as well as speak and write books on the subject. NACI publishes a bimonthly newsletter and an extensive resource guide, finds speakers, provides telephone support for members' business problems, runs Small Business Administration workshops,

NEW BOOK FROM HOC

HOME-OFFICE COMPUTING and the American Management Association have teamed up to provide a new business technology resource. The upcoming book, *Computer Power for Your Small Business, A Guide from Home-Office Computing*, by Nick Sullivan ($22.95; AMACOM, 1990), is a general guide to computerizing a business. It covers business and financial plans, information and project management, type and graphics, preparation of reports, presentations, and newsletters, fax and modem communications, tax preparation, mailing lists, and general office management. For any given application, such as preparing a newsletter or managing a mailing list, the book shows what others have done, indicates the skill and equipment required, describes the major software packages and the learning curve you can expect, and lists additional resources. The book, written for both MS-DOS and Macintosh users, covers far more ground than any other computer book on the market. Available in late October at Walden, B. Dalton, and independent booksellers.







presents an annual fall conference complete with tours of businesses, and monitors legislation affecting independent business owners.

National Association for the Self-Employed, 2328 Gravel Road, Ft. Worth, TX 76118; (800) 232-6273. Annual membership fee is $48.

One of NASE's major benefits is a recently enhanced insurance program for self-employed individuals. Other benefits of membership include the bimonthly newsletter business counseling, discounts on books and other publications, discounts on faxes, cellular phones, office equipment, Sprint and other long-distance discounts, and travel services. New at NASE this fall are a members' credit union, a long-distance phone service called Phone$ave, and an upgraded medical, auto, and property–benefits package for the self-employed.

National Federation of Independent Businesses, Suite 700, 600 Maryland Avenue SW, Washington, DC 20024; (202) 554-9000, or 150 West 20th Avenue, San Mateo, CA 94403; (415) 341-7441. Annual donation is from $75 to $1,000.

Established in 1943, the NFIB is similar to NSBU (see below) but larger and more grass roots, or member-directed, in nature. As a merchant-oriented business-advocacy (lobbying) group, NFIB packs the strong free-enterprise muscle of its 570,000 members, who range from single-person operations to manufacturing businesses of more than 300 employees. Members receive a bimonthly magazine, *Independent Business*, and, on alternate months, a ballot for voting on issues under consideration by Congress. "We have a very motivated membership, as evidenced by a 20 percent return on ballots," remarks NFIB spokesman Terry Hill, "and those votes directly affect our lobbying efforts."

National Small Business United, 1155 15th Street NW, Suite 710, Washington, DC 20005; (202) 293-8830. 1990 president, Karl Krieger, CEO of TransTech, Pittsburgh; and John Galles, executive vice president. The annual membership fee, which varies with the number of employees, starts at $75.

Consistently pro-private enterprise and antiregulation, NSBU represents 50,000 small businesses in its congressional lobbying efforts. Members are frequently surveyed for their opinions on the issues that affect them, but final positions are determined by a 30-member small-business board. Benefits include a monthly newsletter, seminars, and special conferences like last May's Washington Presentation, which featured a talk by President George Bush. This fall, members can participate in the Annual Issues Retreat in Washington from November 16-18. Group insurance plan is available through Mutual of Omaha.

National Business Incubation Association, One President Street, Athens, OH 45701; (614) 593-4331. Dinah Adkins, executive director. Annual membership fee is $125.

The NBIA can help you find—or found—an incubator (a special center created to help businesses in their early stages). Membership benefits include *Directory of Business Incubators*, annual conferences, and publications. The NBIA also lobbies on behalf of the incubator industry, conducts economic-development research, and runs incubator-management training institutes. Your local incubator is a likely place to find business-training seminars.

Service Corps of Retired Executives (SCORE), 1825 Connecticut Ave., Suite 503, Washington, DC 20009; (202) 653-6279. Membership is free.

Through membership in SCORE you get free counseling from experts—primarily retired executives—who've seen it all. In 1990, SCORE celebrates its 25th anniversary, with nearly 3 million clients counseled. Includes workshops at 400 local chapters in 700 locations, plus individual business counseling by 13,000 retired executives. SCORE, which is sponsored by the Small Business Administration, also gets support from local chambers of commerce and other groups.

FINANCIAL SERVICES & SUPPORT

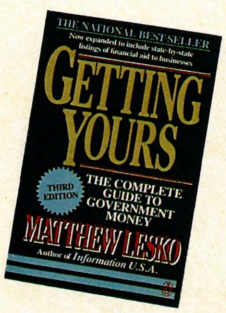
American Institute of CPAs (AICPA), 1211 Avenue of the Americas, New York, NY 10036; (212) 575-3655.

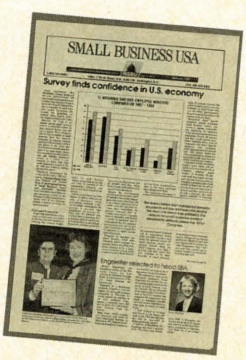
The AICPA, primarily a trade association for accountants, is a good place to find out how to choose and get the most from professional tax services. Services for the public include regional CPA referral and membership status checks and free publications. The AICPA has a membership of 300,000, or 75 percent of the CPAs in the United States. The organization certifies members, presents annual conferences and seminars, and publishes *Journal of Accountancy* and other publications.

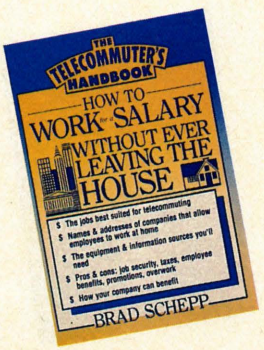
Is your accountant qualified to handle your finances? If he or she is a member in good standing of the American Institute of CPAs, there's little doubt. For starters, AICPA members must complete a college accounting degree program, then pass the rigorous 2½-day Uniform CPA Examination. Finally, the candidate must meet postgraduate-study or job-experience requirements to assure that he or she has a solid grasp of the fundamentals before being licensed to practice. Once in practice, the CPA must take continuing professional courses and adhere to a strict code of ethics to retain his or her license.

Internal Revenue Service Taxpayer Hotline, Taxpayer Information and Education Branch, Taxpayer Service Division, Internal Revenue Service, Department of the Treasury, 1111 Constitution Avenue NW, Washington, DC 20274; (800) 424-1040.

Can you deduct automobile expenses? What percentage of business meals can you deduct as the owner of a home-based business? How much pre-tax income can you contribute annually to a retirement plan? If you represent a sole proprietorship, corporation, or partnership, call the IRS Hotline for answers to these and other specific questions. You can also order an Employer Identification Number, tax forms, an annually updated Small Business Tax Guide, or a Small Business Startup Kit. You may find it tough to get through tax time, but, as always, the IRS is a fountain of free tax information. Although representatives strive for accuracy, be sure to verify all major decisions with a tax specialist. (For a catalog of publications, workshops, and







other tax resources, call [800] 424-3676 [424-FORM]).

National Association of Credit Management, 8815 Centre Park Drive, Suite, 200 Columbia, MD 21045; (301) 740-5560. Fees vary.

If you sell a product or service, at some point you may find yourself extending credit. Through NACM, small businesses can obtain credit information and guidance on such tough matters as merchant credit and collections. NACM's divisions cover credit management, credit reports, fraud protection, credit education, and international credit.

National Foundation of Consumer Credit, 8701 Georgia Avenue #507, Silver Spring, MD 20910; (301) 589-5600. Credit-counseling referral hotline: (800) 388-2227.

If you are struggling to manage your debt or restore good credit, the NFCC, a nonprofit umbrella group for 500 consumer-credit counseling services across the country, can furnish you with published information and refer you to a nearby credit-counseling service.

National Venture Capital Association, 1655 N. Fort Myer Drive, Suite 700, Arlington, VA 22209; (202) 528-4370.

In times of tight money, small businesses often have to seek alternative sources of funding. The NVCA is a trade association for venture capital firms; it provides a membership directory giving officers' names, corporate addresses, and telephone numbers of member firms. It's free if you include a self-addressed envelope with $1.65 postage.

SBA Office of Small Business Loans, 1441 L Street NW, Washington, DC 20416; (202) 653-6570.

If your bank won't approve a business loan, you can go to the SBA for a guarantee of up to 90 percent of the total. "This year, Congress actually approved more money than we requested for guaranteeing certain types of loans," says the SBA's Mike Stamler.

INTERNATIONAL TRADE SERVICES & SUPPORT

Eastern Europe Business Information Center, The U.S. Department of Commerce, Room 6043, Washington, DC 20230; (202) 377-2645 or (202) 377-4473.

If you want to take advantage of new markets in Eastern Europe, you're going to need a lot of information from the U.S. government. The EEBIC was established in January as a part of the Commerce Department's attempt to open a "gateway to all the resources of America's public, private, and voluntary sectors" in this field, says Commerce Secretary Robert A. Mosbacher. Call for publications, upcoming international trade events, and referrals.

Small Business Export Hotline, (800) 243-7232 or (800) 244-7232 in Massachusetts; John C. Rennie, president.

You'll get the private-enterprise angle on international trade from this toll-free service of the Small Business Foundation of America. Launched on March 26, the hotline provides information about export financing, what to expect from and how to deal with the Commerce Department, licensing and insurance requirements, distribution, language issues, and developments in Eastern Europe.

Office of the U.S. Trade Representative, Executive Office of the President, 600 17th Street NW, Washington, DC 20506; (202) 395-3230.

If you sell or buy from abroad, sooner or later you'll have to deal with the office of the U.S. Trade Representative, which negotiates, administers, and monitors international trade agreements. Call the USTR office for details on United States trade agreements with foreign countries—the recent relaxation of export regulations for computer software and hardware, for example.

Customs Service Public Information Division, U.S. Treasury Department, 1301 Constitution Ave., Washington, DC 20229; (202) 566-8195.

Whether your products are incoming or outgoing, you'll have to deal with U.S. Customs agents. This office will give you information on trade tariffs, quotas, or other customs requirements, answer questions over the phone, provide advisory services, and mail or fax specific publications or fact sheets.

U.S. International Trade Commission, 500 East Street SW, Washington, DC 20463; (202) 252-1003.

If you're interested in delving into international trade, you can find out a great deal just by visiting the USITC library or calling its librarians, who will locate publications, books, and other media on commercial policy, foreign trade, and trade statistics. USITC staff are available to answer telephone inquiries, make referrals, and, for a fee, copy, fax, or mail publications.

MISCELLANEOUS SERVICES

Business Radio Network, 888 Garden of the Gods Road, Colorado Springs, CO 80907; (719) 528-7040 or (800) 321-2468.

Call or write BRN for a list of nationally syndicated business radio shows in your area, including Paul and Sarah Edwards's "Home Office Show," "Women's Business Exchange," "SCAMs America" (which endeavors to expose business frauds), "The New Venture Money Show," (a support forum for start-ups), and "Grand Opening," (on the franchise industry).

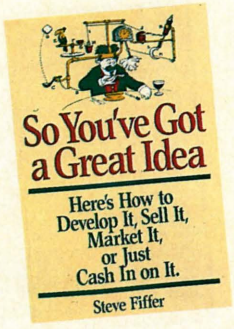
The Business Strategy Seminar, Katherine Elster, Director, 343 East 30th Street #3C, New York, NY 10016; (212) 481-7075. Fee is from $250 to $500.

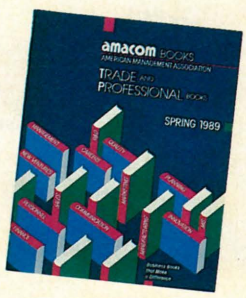
New and seasoned small-business owners benefit from Elster's copyrighted training techniques, which she employs in small, personal- and business-strategy support groups. They are designed to integrate practical business skills with a belief in success. Regional groups are forming, and interested entrepreneurs with business and counseling training should contact Elster for information.

Council of Better Business Bureaus, Inc., 4200 Wilson Blvd., Suite 800, Arlington, VA 22203; (703) 276-0100.

Get the complaint records of potential clients, customers, or vendors, and take advantage of such services as speaker referrals. The more than 90 free or inexpensive publications include *Investor Alert*, *How to Protect Your Business*, *Better Business Bureau A to Z Buying Guide*, and *Do's and Don'ts of Advertising* (a loose-leaf reference publication available by subscription for $300 per year).

EurAuPair Intercultural Child





Care Program, 250 North Coast Highway, Laguna Beach, CA 92651; (714) 494-5500 or (800) 333-3804.

American Institute for Foreign Study, AuPair in America Program, 102 Greenwich Avenue, Greenwich, CT 06830; (800) 727-2437 or (203) 863-6123.

For a fee, organizations such as EurAuPair and AIFS will locate and carefully select a reliable, English-speaking, 18- to 25-year-old au pair from Scandinavia, France, Germany, or another European country, who will live in your home for a specified time and care for your children for 45 hours per week. The term of service is usually one year, and salaries and associated fees put the cost at an average of about $165 per week.

Working from Home Hotline, P.O. Box 5172, Santa Monica, CA 90405; (900) 456-WORK; office line: (213) 399-2028. Paul and Sarah Edwards, directors.

Call (toll) for daily profiles of new home-based business possibilities and new franchises, book and resource recommendations, reviews, strategies, and more. The Edwardses, contributing editors to HOME-OFFICE COMPUTING, speak to business groups around the country, publish books (including *Working from Home*), host the Sunday "Home Office Show" on the Business Radio Network, produce audiotapes that address the concerns of independent business owners, and serve as Sysops for CompuServe's Working from Home Forum (GO WORK).

Research on Demand, 2030 Addison Street, Berkeley, CA 94704; (415) 841-1145 or (800) 227-0750.

Are you in need of quick information and willing to pay for it? In response to your business or other information requests, information brokers at ROD will search Dialog, Lexis, Nexis, and thousands of other print and electronic databases, and send you a prepared report. ROD says a typical small-business research project runs about $300-$700.

Seminars Directory and List Service, 1402 E. Skyline Drive, Madison, WI 53705; (608) 231-3070.

In Seminars's semiannual *Directory of Seminars and Workshops across the United States and Canada* (annual fee is $60), you'll find such programs as Business Writing for Results, the Innovation Workshop, Strategic Management & Operational Control Skills, Essentials of Purchasing, and much more. The company also researches, manages, and brokers more than 5,000 mailing lists.

DIRECTORIES & CATALOGS

The Directory of State & Federal Funds, Pilot Books, 103 Cooper Street, Babylon, NY 11702; (516) 422-2225. $5.

The funds are there—this comprehensive list of state and federal funding sources also gives you tips on how and to whom to apply, and how to shortcut through the inevitable red tape and bureaucracy.

Document Retrieval Sources & Services Directory, The Information Store, 140 Second Street, 3rd floor, San Francisco, CA 94105; (415) 543-4636. $65.

Researchers and writers can find more than 200 information-retrieval sources to help them track specific articles, books, copyrights, titles, and other business documents.

Information Industry Directory, Gale Research, Inc., 835 Penobscot Bldg., Detroit, MI 48226-4094; (800) 223-4253, (313) 961-2242. $420; updated annually.

It's expensive, but if you depend on electronic information, it's worth it. This comprehensive guide keeps you up to date on electronic databases, telecommunication systems, on-line vendors, CD-ROM, and other electronics manufacturers and services worldwide. Also available in libraries.

The Encyclopedia of Associations, Gale Research, Inc., 835 Penobscot Bldg., Detroit, MI 48226-4094; (313) 961-2242. $305; updated annually.

Where there's a profession, there's an association. In this book, you'll find groups ranging from the Association of Association Executives to the National Turkey Association and the American Medical Association. Also available in libraries.

The Whole Work Catalog, The New Careers Center, 1515 23rd Street, P.O. Box 297-CT, Boulder, CO 80306; (303) 447-1087.

An alternative-careers catalog, this free publication covers books and periodicals on alternative workstyles and careers, job hunting, freelancing, and starting and maintaining a home business. The publishers seem to have taken a great deal of time and care in selecting the listings.

BOOKS, TAPES, AND OTHER MEDIA

The Entrepreneur & Small Business Problem Solver, by William A. Cohen (1990; John Wiley & Sons; New York; $24.95).

Some of the most useful features of this weighty, encyclopedia-style guide are official forms and worksheets for nearly every aspect of business startup and management. You'll also find reading lists, resources, and short tips in each section.

Getting Yours, by Matthew Lesko (1987; Penguin Books; New York; $10).

There may be less of it to go around these days, but you can still get your hands on government money. This book lists agencies for all 50 states, the amounts of the grants, people to contact, addresses, and phone numbers. Lesko, a nationally known speaker on this subject, also tells you how to write a proposal that can win you the capital you need to do business.

How to Run Your Own Home Business, by Coralee Smith-Kern and Tammara Hoffman Wolfgram (1990; NTC Publishing Group, Chicago; $7).

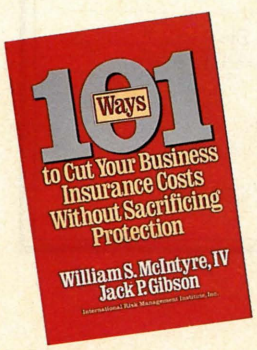
The authors, both home-business veterans, relate their advice on business basics—from advertising to servicing accounts, from designing a workspace to legal considerations and health benefits.

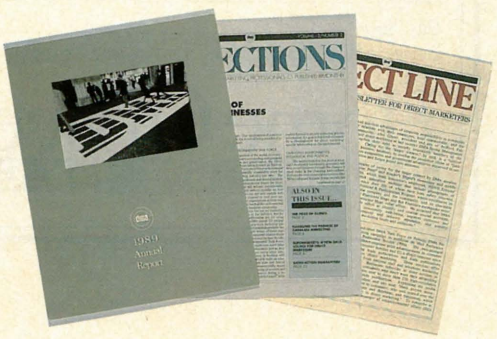
How to Write a Winning Business Plan, by Joseph R. Mancuso (1990; Prentice-Hall/Simon & Schuster, New York; $14.95).

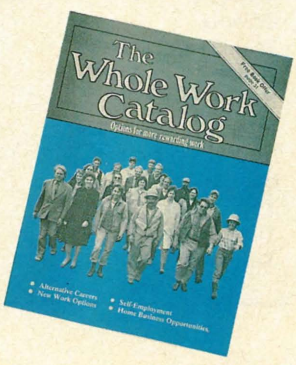
Here's help writing the kind of business plan that will attract the startup or growth financing you need.

Information USA, by Matthew Lesko (1983, revised in 1986; Viking-Penguin, New York; $25).

Flipping through this exhaustive guide to the U.S. government is a perfect excuse for productive procrasti-







nation. Lesko gives advice on how to reach the experts; sources of grants and contracts; small-business financing; market and technical research; business education; and SBA development centers. Includes detailed chapters on all government agencies, with contacts and available free publications.

Master Guide to Free Software for IBMs and Compatibles, by Alfred Glossbrenner (1989; St. Martin's Press, New York; $18.95).

If you're addicted to software, this book's a gem. It covers what to get, where to find it, and what the software will do for you. It includes a great layperson's explanation of telecommunications protocols.

Running a One-Person Business, by Whitmeyer, Raspberry & Phillips (1990; TenSpeed Press; Berkeley, CA; $12).

This is a basic, practical guide to being persistent, facing the facts, minimizing risks, becoming organized, being a hands-on learner, diversifying, and many other requirements for achieving success as an independent.

The Small-Business Resource Guide, by Joseph R. Mancuso (1989; Prentice-Hall/Simon & Schuster, New York; $20).

Master marketer Mancuso relates business advice and spicy anecdotes among hundreds of short descriptions of associations, consultants, directories, and government agencies in this useful guide, which could use an update.

The Telecommuter's Handbook: How to Work for a Salary Without Ever Leaving the House, by Brad Schepp (1990; Pharos Books, New York; $10).

This paperback gives useful tips for proposing telecommuting to your manager or corporation and lists hundreds of companies that employ telecommuters, complete with salary range.

The Work-at-Home Sourcebook, by Lynie Arden (1990; Live Oak Publications; Boulder, CO; [303] 447-1087; $14.95).

Another perfect prelude to a telecommuting-job search, this comprehensive classic lists U.S. companies and businesspeople who hire homeworkers. It also features charts and photographs.

Working from Home, by Paul and Sarah Edwards (1990; Jeremy P. Tarcher, Inc., Los Angeles, CA 90069; [213] 273-3274; $14.95).

The new edition of this home-business classic includes a list of 500 hot business ideas and features beefed-up sections on health insurance, merchant credit, pricing, marketing, and technology purchasing.

101 Ways to Cut Your Business Insurance Costs Without Sacrificing Protection, by William S. McIntyre IV and Jack P. Gibson. (1988; McGraw-Hill & Company, New York; $22.95).

A bit dry but clearly written, this guide by two consultants for the International Risk Management Institute covers such critical topics as risk financing, property-insurance cost control, and expediting claim payments.

So You've Got a Great Idea, by Steven Fiffer (1986; Addison-Wesley; Reading, MA; $9).

How to convert your business idea into a reality. One of this book's best features is an excellent resource appendix that lists inventors' associations, university evaluation

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ELECTRONIC DATABASES & SERVICES

Since sign-up, baud-rate, and connect-time charges for services vary, call or write for a complete list of rates and services offered by the following companies.

CompuServe Information Service, 5000 Arlington Center Blvd., P.O. Box 20212, Columbus, OH 43220; (800) 848-8199; or (614) 457-0802 from Ohio or outside the United States.

CompuServe offerings of interest to independent-business operators and researchers include the Working from Home Forum (GO WORK), the International Entrepreneur's Network on CompuServe (GO USEN); the Consultants Forum (GO CONSULT); software and hardware support forums; and many other professional forums and libraries.

Dun's Direct Access, a Dun and Bradstreet Company, 3 Sylvan Way, Parsippany, NJ 07054-3896; (800) 654-7834 or (201) 605-6445 in New Jersey. This database of nearly 9 million companies is searchable by industry, geographic location, zip code, sales volume, and number of employees. Updated daily.

Dow Jones News/Retrieval, Dow Jones & Company, Inc., P.O. Box 300, Princeton, NJ 08543-0300; (609) 452-1511 or (800) 522-3567.

Although connect-time charges are steep ($2 or $3 per minute during prime time), DJN/R is still the electronic news source for financial professionals and offers a complete range of historical and real-time data that can be downloaded to spreadsheets.

GEnie (GE Network for Information Exchange), 401 North Washington Street, Mail Stop MC5A, Rockville, MD 20850; (800) 638-9636 (voice line); (800) 638-8369 (modem sign-up line).

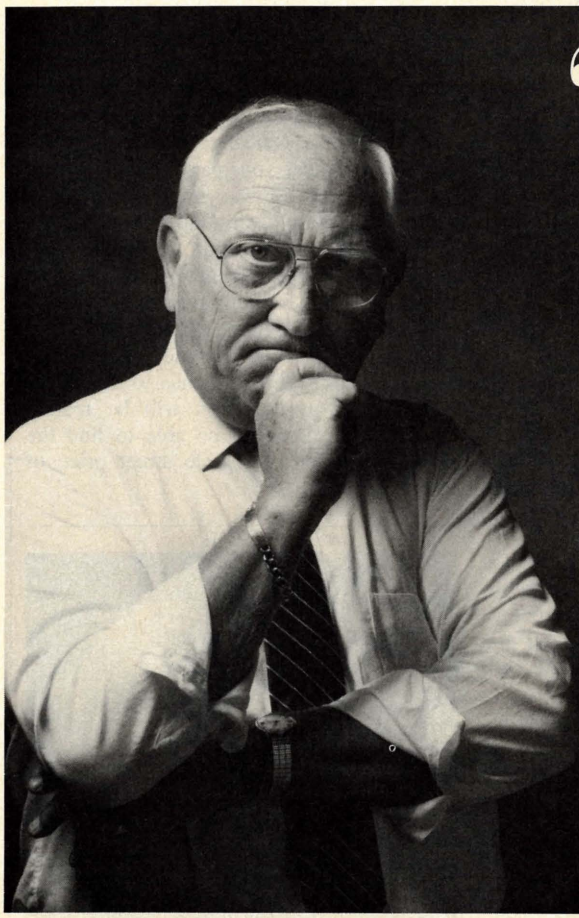
GEnie is a bit harder to use than CompuServe, but its edge is an inexpensive $5–$10/hour nonprime-time fee. Once you're used to it, you join more than 200,000 subscribers who have access to a wide range of business and computer support groups, including the Home-Office/Small Business Roundtable and a variety of other professional and software roundtables.

Prodigy Interactive Personal Service, Prodigy Services Company, 445 Hamilton Avenue, White Plains, NY 10601; (914) 993-8000. For information or a sign-up kit call (800) 822-6922, ext. 205.

You can't beat Prodigy's flat fee of $9.95 per month; and you don't pay the connect-time charges of other networks. The service has a heavy on-line shopping emphasis, but also provides late-breaking news, home-business advice, and computer and software reviews (courtesy of HOME-OFFICE COMPUTING), on-line business and financial experts, financial services, and more.

PCLink, Quantum Computer Services, 8619 Westwood Center Drive, Vienna, VA 22180; (800) 392-8200; call (703) 448-8700 in Virginia.

PC-Link doesn't cater to hard-core business users, but does provide business and financial news, and electronic banking for a $9.95 fee. ■



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CIRCLE READER SERVICE 46

The Best Hardware Deals

HOC's Technical Editors Select Current Phone, Fax, Printer, and Laptop Bargains

We're spoiled. The quality of computer and other home-office equipment is steadily improving while prices just as steadily fall. But even in this you-can't-go-far-wrong climate, we keep our eyes peeled for equipment that represents the best combination of features, performance, reliability, and reasonable price: good deals.

It's not easy to whittle down the field of worthy products that we see over the course of a year and come up with a short list; we're forced to omit many that we'd like to mention. Few, if any, of the products mentioned here are the cheapest in their categories—quite the opposite in one case—but each, in its own way, is an exceptional deal.

You may wonder at our omission of desktop computer systems in the roster of best deals. Here's the explanation: In our view, there are so many good products—and good deals—in the desktop computer market that, really, no single one stands out as exceptional. But that's a great state of affairs for consumers.

We hope you will find it useful to have (what is in most cases) a second look at a bevy of the best hardware deals available.

—THE TECHNICAL EDITORS

STEVEN CHEN, MARIE ALVICH-LOPINTO, *and* EDWARD STEVENSON *are, respectively, the managing, associate, and senior technical editors at* HOME-OFFICE COMPUTING.

Dot-Matrix, VGA Superstars

Citizen GSX-140

LIST PRICE: $499

MANUFACTURER'S PHONE: (213) 453-0614

HARDWARE REQUIREMENTS: MS-DOS or Amiga computer with serial or parallel port and cable

EMULATIONS: Epson-LQ, IBM Proprinter X24

TEXT PRINT SPEED (AT 10 CHARACTERS PER INCH): High-speed draft: 192 characters per second (cps); draft: 160 cps; letter quality (LQ): 53 cps

MAXIMUM GRAPHICS RESOLUTION: 360 by 360 dots per inch

RESIDENT FONTS: 4 LQ, draft, high-speed draft

PAPER HANDLING: Push or pull tractor; friction feed (cut-sheet feeder optional)

PAPER SIZE: 4.5 to 10 inches

BUFFER: 8K (32K upgrade optional)

DIMENSIONS: 16.9 by 12.6 by 5.1 inches

Citizen's GSX-140 is surely among the most feature-laden moderately priced dot-matrix printers available. The control panel alone sets this printer apart from the pack. It uses six keys to dial up about 75 plain-English prompts in a liquid crystal display.

This printer's paper handling, too, is first-rate. Automatic loading of continuous paper is quick and sure. When a print job is done, the perforation is automatically lined up precisely with the tear bar, which makes it super easy to tear your pages off. A paper-parking feature allows you to feed single sheets without unloading the fanfold stock.

The GSX-140's output quality is very good indeed, with a generous selection of fonts. Its speed is about average for 24-pin personal printers. Although the printer is not as widely distributed as some better-known brands (check with your dealer to make sure that service and supplies will be readily available), you should be able to find the GSX-140 at an irresistible street price of less than $300.

Zenith ZCM-1492

LIST PRICE: $999

MANUFACTURER'S PHONE: (708) 699-4800

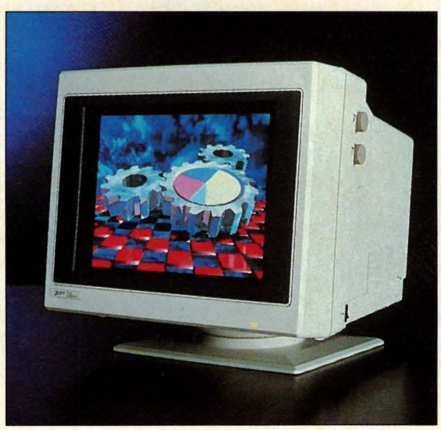
Sometimes the best deal is the same as the best that money can buy. Take the Zenith ZCM-1492: It is simply the best standard (640 by 480) VGA monitor available today.

What sets it apart from other monitors? Primarily Zenith's flat tension mask (FTM) technology. The mask is the perforated screen through which the electron beam reaches the phosphors on the face of the picture tube. Zenith has figured out how to make this completely flat, resulting in a perfectly flat screen.

One major benefit of the flat screen is reduced reflection. A typical, curved monitor may require a glare-reduction screen to deal with the reflections that are all too common in offices. The ZCM-1492 doesn't require an antiglare screen.

The FTM technology also gives this monitor a sharper, brighter picture. The images look more vivid and lifelike than those produced by other VGA screens.

This monitor (an upgrade of the ZCM-1490) boasts a finer dot pitch than its predecessor (0.28mm), is lighter and more stylish, and comes with a tilt-and-swivel stand. You should be able to buy this beauty for around $600.



See page 87 for product information.

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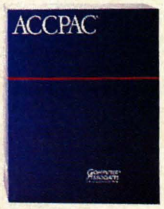

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Hot Deals for the Road

Toshiba T1000SE

LIST PRICE: $1,699

MANUFACTURER'S PHONE: (714) 583-3349

MICROPROCESSOR: 9.54-MHz Intel 80C86

DISPLAY: Backlit LCD, double-scan CGA mode (640 by 400)

DISK DRIVE: 3.5-inch 1.44MB

MEMORY (STANDARD/MAXIMUM): 1MB/3MB

PORTS: Parallel, serial

BATTERY LIFE/RECHARGE TIME: 2 hours/2 to 3 hours

DIMENSIONS: 12.2 by 10.2 by 1.8 inches

WEIGHT (WITH BATTERY): 5.9 pounds

The T1000SE is descended from Toshiba's first notebook computer, the T1000—which in its heyday was also a great deal. While the SE uses a similar microprocessor, it is noticeably faster than its predecessor. The liquid crystal display benefits from a major advance: double-scan CGA mode, which improves character sharpness. The T1000SE's keyboard is excellent for a computer this small: good and comfortable.

The computer's handy AutoResume feature allows you to turn it off without closing files or exiting applications. Just touch a key and you're right back where you left off. The built-in battery-level display is another plus.

The T1000SE has no hard-disk drive, but Toshiba offers a nonvolatile RAM disk option that compensates, to a degree, for this lack. It will store files while the computer is turned off as long as the battery retains some charge. You can currently find the T1000SE on the street for between $1,000 and $1,100.

NEC UltraLite

LIST PRICE: $2,499 (1MB), $2,999 (2MB)

MANUFACTURER'S PHONE: (708) 860-9500

MICROPROCESSOR: 9.83-MHz NEC V30

DISPLAY: Backlit supertwist LCD, CGA mode

DISK DRIVE: Silicon hard disk, 1 or 2MB

MEMORY: 640K

PORTS: Serial (parallel port comes with optional external 3.5-inch, 1.44MB floppy-disk drive)

BATTERY LIFE/RECHARGE TIME: 2 hours/5 to 8 hours

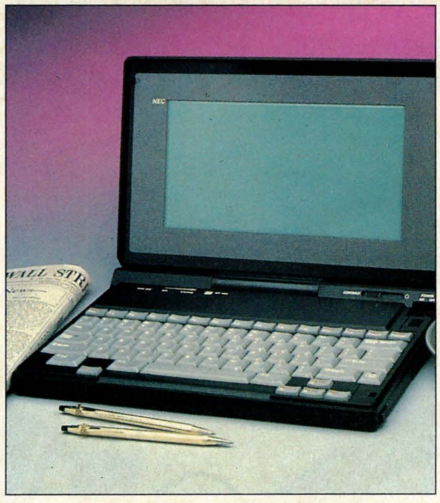
DIMENSIONS: 11.8 by 8.3 by 1.4 inches

WEIGHT (WITH BATTERY): 4.4 pounds

At 4.4 pounds, the UltraLite is currently the lightest, most convenient full-powered MS-DOS laptop available, but it does not pretend to be the only computer system you'll ever need. It is designed as a mobile extension to your desktop computer, where it needs to "dock" to load and unload files.

It's light because it has no disk drives. Instead of a traditional disk, the UltraLite uses a "silicon hard disk," essentially a bank of RAM chips supported by a special battery. Files are transferred to and from a desktop computer via the LapLink system (included) or with an optional 3.5-inch, 1.44MB external floppy-disk drive ($399).

Considering the compactness of the computer, the keyboard is surprisingly comfortable. The blue, supertwist, backlit LCD screen is readable in most lighting conditions. The superlight, replaceable battery pack (0.3 pounds) provides a modest two hours of working time. Take extra batteries if you need more time. The UltraLite with 2MB silicon disk sells for less than $1,600.



Compaq LTE/286 Model 20

LIST PRICE: $3,999

MANUFACTURER'S PHONE: (713) 370-0670

MICROPROCESSOR: 12-MHz Intel 80C286

DISPLAY: Backlit supertwist LCD, CGA mode

DISK DRIVES: 3.5-inch, 1.44MB; 20MB, 29 ms

MEMORY (STANDARD/MAXIMUM): 640K/2.6MB

PORTS: Parallel, serial

BATTERY LIFE/RECHARGE TIME: 3.5 hours/8 to 10 hours

SIZE: 11 by 8.5 by 1.9 inches

WEIGHT (WITH BATTERY): 6.7 pounds

Introduced last October, the LTE/286 unquestionably set a new standard for lightweight portable computers.

With its letter-size (8.5-by-11-inch) footprint, the unit slips easily into an overnight bag or briefcase. (A carrying case is available as an $89 option). And the computer's 3.5-hour battery life is among the longest in the industry.

Although key spacing does feel a bit cramped (if you reduce the dimensions of the box beyond a certain size, this is inevitable), Compaq did a great job fitting all the keys into such a small area. The keyboard layout is intelligent. Many laptops have appeared since the release of the LTE/286 with VGA-mode displays, making the LTE's CGA screen look somewhat out of date, but it is clear and readable.

For people who like to travel light and need 286 processing power and a hard-disk drive, at discounts of more than $1,200 off list price, the LTE/286 combination is hard to beat.

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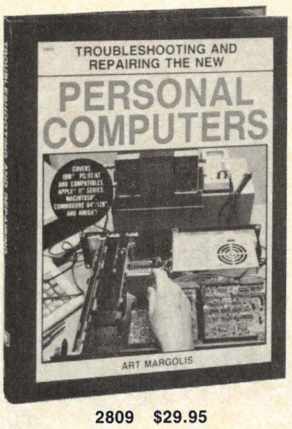

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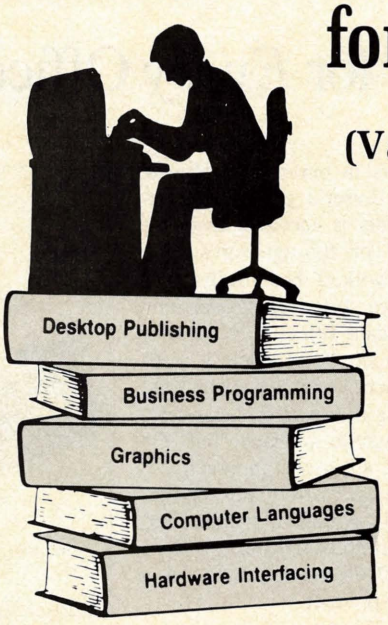

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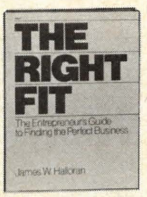

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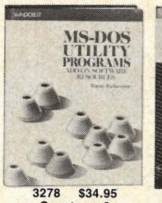

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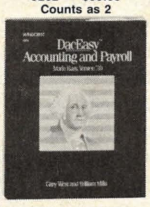

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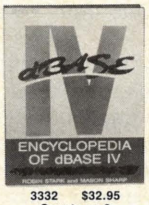
3382P $29.95
Counts as 2

15020P $24.95

3239 $29.95
Counts as 2



3332 $32.95
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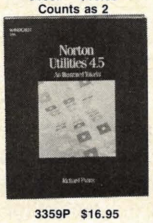

3359P $16.95

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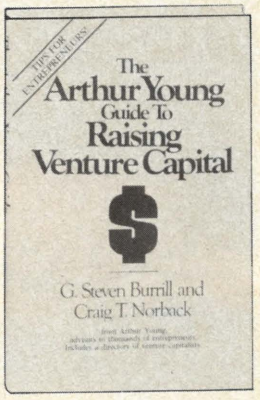
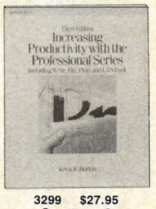


30014 $24.95

3331P $14.95

30013P $12.95

30022P $7.95



3299 $27.95
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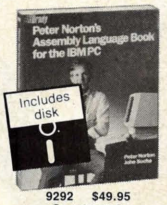

9292 $49.95
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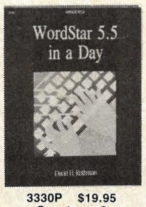
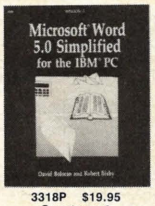


3330P $19.95
Counts as 2

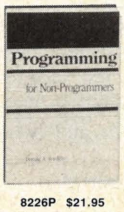


3318P $19.95
Counts as 2

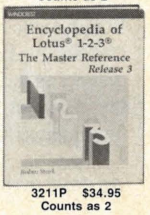
2959 $29.95
Counts as 2

3228P $22.95
Counts as 2

3341 $16.95



8226P $21.95



3211P $34.95
Counts as 2

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CIRCLE READER SERVICE 50

Laser Printers for *Every* Office

OkiLaser 400

LIST PRICE: $1,395

MANUFACTURER'S PHONE: (609) 235-2600

MAXIMUM PRINT SPEED (TEXT): 4 ppm

MAXIMUM RESOLUTION: 300 by 300 dpi

RESIDENT FONTS: 17 bit-mapped (not scalable)

PAPER HANDLING: Single 200-sheet letter-size cassette

EMULATION: HP LaserJet Series II

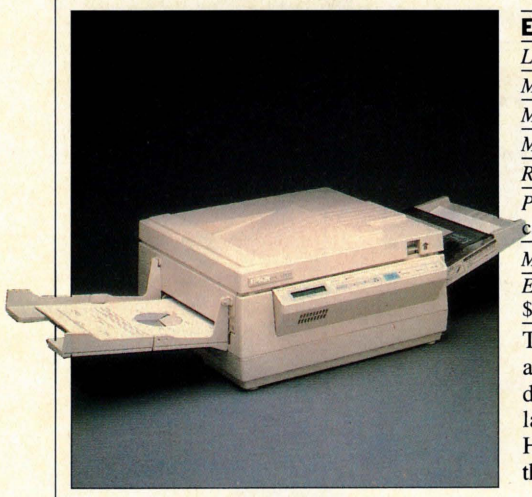
MEMORY: 512K standard, 2.5MB maximum

The OkiLaser 400 uses an array of light-emitting diodes (LEDs) rather than a laser beam to form the image. The resulting print, however, looks every bit as good as standard laser output.

This printer performed flawlessly with the HP LaserJet drivers in our many software packages. The OkiLaser's generous selection of resident fonts is accessed from the LCD setup panel or through software.

The OkiLaser worked beautifully with third-party fontware from Bitstream and Glyphix, and Okidata offers a variety of additional fonts on small, proprietary cards that list for $195 each. Okidata packages the toner and drum for this printer separately, not in a single cassette—cheaper but less convenient than the all-in-one approach.

The printer's documentation is exceptionally clear and well organized, with an unusually helpful troubleshooting section. Priced around $900 on the street, this is a most cost-effective product.



Epson EPL-6000

LIST PRICE: $1,399

MANUFACTURER'S PHONE: (213) 539-9140

MAXIMUM PRINT SPEED (TEXT): 6 ppm

MAXIMUM RESOLUTION: 300 by 300 dpi

RESIDENT FONTS: 6 bit-mapped (not scalable)

PAPER HANDLING: Single 150-sheet letter-size cassette

MEMORY: 512K standard, 4.5MB maximum

EMULATION: LaserJet II (Epson FX optional, $229)

The EPL-6000, introduced less than a year ago by Epson, longtime market leader in dot-matrix printers, has gained quick popularity among personal laser users. This Hewlett-Packard LaserJet II compatible uses the six-page-per-minute Tokyo Electric Co. (TEC) engine, which places it in the middle-speed range for small office laser printers. The EPL-6000 operates under HP LaserJet drivers without a hitch, and the unit's print quality is up there with the best.

Epson has recently extended the printer's warranty to two years and is currently offering another inducement to prospective buyers: If you pick up an EPL-6000 before December 31, you will get UDP Data Products' 65-in-One font cartridge free of charge. Yes, folks, that's 65 bit-mapped fonts—in one compact cartridge.

This free fontware offer, combined with the two-year warranty, the printer's admirable performance, and street prices as low as $800 makes the EPL-6000 a red-hot contender for the smaller office.

Hewlett-Packard LaserJet III

LIST PRICE: $2,395

MANUFACTURER'S PHONE: (208) 323-6000

MAXIMUM PRINT SPEED (TEXT): 8 ppm

MAXIMUM RESOLUTION: 300 by 300 dpi

RESIDENT FONTS: 14 bit-mapped, 8 scalable typefaces

PAPER HANDLING: Single 200-sheet letter-size cassette

MEMORY: 1MB standard, 5MB maximum

EMULATIONS: None

If you need an eight-page-per-minute, non-PostScript laser printer, Hewlett-Packard's newest offering, the LaserJet III, looks like the best bet around. A new printer-control language (PCL 5) and two new features—AutoFont and Resolution Enhancement—set this printer apart from all other HP and HP-compatible laser printers.

Resolution Enhancement is the printer's ability to make smaller-than-normal dots, using these to fill in the jagged "steps" left by standard-size dots on curved or slanting edges of characters. The result is sharper, smoother looking type.

AutoFont consists of a set of eight scalable typefaces from which users can generate printed fonts in a wide range of sizes. Other typefaces can be added in the form of HP and third-party cartridges.

With a street price as low as $1,500, the LaserJet III offers an exceptional value that is almost in a class by itself.

Fabulous Fax Bargains

Panasonic KX-F80

LIST PRICE: $849

MANUFACTURER'S PHONE: (201) 348-7000

RESOLUTION: Standard (203 by 98 dots per inch [dpi]) and fine (203 by 196 dpi)

MAXIMUM DOCUMENT WIDTH: 8.5 inches

FEATURES: Built-in answering machine, speakerphone

DIMENSIONS: 13 by 9.9 by 2.9 inches

The Panasonic KX-F80 is a facsimile machine with a built-in answering machine and speakerphone. It allows your existing phone line to double as your fax line—a practical time-, space-, and money-saving solution, if your fax volume is low. And with discounted prices well below $500, this unit is an easy purchase to justify. Oh, yes—there's one other benefit: It's portable.

The KX-F80 is a bare-bones fax. You get no automatic document feeder, no automatic paper cutter, and a mere 10-number memory. This unit cannot poll other fax machines, nor can it be programmed for delayed transmission. The KX-F80 does, however, flawlessly send and receive standard Group 3 faxes automatically.

The answering machine is more fully featured. You record your outgoing message on a microchip; incoming messages are recorded on a microcassette tape. Virtually all answering-machine functions can be accessed remotely.

If you need a low-volume fax as well as an answering machine but have only one phone line, the KX-F80 is a great alternative to installing a second line. And, as an alternative to purchasing two pieces of equipment, the KX-F80 will save you both space and money.

Ricoh RF 920

LIST PRICE: $2,295

MANUFACTURER'S PHONE: (201) 882-2000

RESOLUTION: Standard (203 by 98 dots per inch [dpi]) and "detailed" (203 by 196 dpi)

MAXIMUM DOCUMENT WIDTH: 8.5 inches

FEATURES: Polling, delayed transmission, 10-page automatic document feeder, automatic paper cutter, 124-number memory

DIMENSIONS: 12.9 by 12.8 by 4.25 inches

The ideal home-office fax machine should be compact, sturdy, and easy to set up and use. It should incorporate a voice/data switch, an automatic paper cutter, an automatic document feeder, a receiving tray for incoming documents—in the front of the unit—and a simple control panel. Features should include delayed transmission, polling, and internal memory for storing outgoing documents or incoming material (in case the paper runs out). The Ricoh RF920 offers all of the above—and then some.

Setting up the RF920 is admirably simple: The user selects desired functions by entering a series of two-digit codes; all 29 setup codes are listed in a handy reference guide that tucks into a slot on the back.

Another thoughtful touch: The RF920 lets you record an outgoing message to warn callers that they've reached your fax machine, giving them enough time to hang up before they get that piercing fax squeal.

Aside from providing all the features you'd expect to find in a large, expensive, industrial-strength office fax in a neat, compact package, the RF920 is a luxury bargain at street prices below $850.

Toshiba 3600

LIST PRICE: $1,495

MANUFACTURER'S PHONE: (714) 583-3000

RESOLUTION: Standard (203 by 98 dots per inch [dpi]) and fine (203 by 196 dpi)

MAXIMUM DOCUMENT WIDTH: 8.5 inches

FEATURES: Built-in answering machine, polling, delayed transmission, 10-page automatic document feeder, 30-number memory, music on hold

DIMENSIONS: 13.8 by 10.6 by 5.2 inches

The Toshiba 3600 is a full-function fax with a feature-packed answering machine. It can automatically switch between fax and answering-machine modes, and includes delayed transmission and polling.

Once you get through the tedious procedures that are a part of setting up most fax/answering machines, the unit works like a charm. The 3600 doesn't take up much room on a desk. The document feeder can hold up to 10 pages for transmission; unfortunately, the machine lacks a paper cutter.

The answering machine has all the functions you'd expect. Its most striking feature is remote paging. You can set up the unit to call you at another phone whenever any messages come in. Plus you can access all answering machine functions remotely.

For those who can live without a paper cutter, at a street price of around $650, the Toshiba 3600 is a fine value.

Phone Tools with More of What You're Looking For

Southwestern Bell FD 8100

LIST PRICE: $200

MANUFACTURER'S PHONE: (317) 841-8006

FEATURES: LCD, conference, hold, speakerphone, call timer, redial, name/number memory scan, ringer-volume control

Southwestern Bell's Freedom Phone FD 8100 is a two-line speakerphone with all the basics: sturdy components, clear sound quality, speed-dialing, automatic redial, tone or pulse mode, and other handy features such as hold, mute, and conference calling.

What really sets this phone apart is a dialing directory that stores up to 150 numbers—and names. You can place a call by entering the name of the person you're calling from the unit's QWERTY keyboard.

Professionals who need to bill consulting time to their clients will love this phone's built-in automatic call timer. Everyone should like the FD 8100's conveniently placed controls.

One minor drawback of the FD 8100 is that it has only one phone-line connector. Depending on how your lines are wired, you may have to buy a special adapter in order to connect them.

Overall, the Southwestern Bell FD 8100's features make it a great investment for anyone who needs to keep a passel of phone numbers accessible at the touch of a button. Expect to pay around $160 for this beauty.

Code-A-Phone 2880

LIST PRICE: $189

MANUFACTURER'S PHONE: (503) 655-8940

FEATURES: Voice time/date stamp, two digital message counters, remote message access, programmable security code

The Code-A-Phone 2880 is not your everyday answering machine. Yes, it has fancy features like remote message access and a time/date stamp, but this unit is even more talented than the rest. The 2880 lets callers deposit messages into either of two "mailboxes"—like a voice-mail system.

If you don't pick up the phone when someone calls, a recorded message tells the caller how to leave a message in either mailbox. Digital displays tell you how many messages are waiting in each mailbox, and controls allow playback of either tape. In addition, like many other remote-access answering machines, the 2880 can be used to leave private messages for callers who are entrusted with the retrieval code.

At roughly $160 (street price), the Code-A-Phone 2880 is a very good deal for such a versatile answering machine—and one of the few available solutions for those who need to keep business and personal messages separate.

PhoneMate 1850

LIST PRICE: $220

MANUFACTURER'S PHONE: (213) 618-9910

RECHARGE TIME: 12 hours

MAXIMUM RANGE: 1,000 feet

MESSAGE RETRIEVAL: Base, handset, and remote phones

FEATURES: Out-of-range alarm, redial, flash, pause, mute, nine-number autodialer, automatic security coding, personal memo

The PhoneMate 1850 is a sexy, top-of-the-line cordless phone with a built-in answering machine.

The sound quality is excellent, even at maximum range. The well-written user's guide is complete, organized, and easy to read. There's no index, but the table of contents should suffice for most users.

Even with its long list of features, this unit is simple to use. All the base-unit controls are conveniently duplicated on the handset.

A minor drawback is that it uses one microcassette to record incoming and outgoing messages. Units that allow you to record your outgoing message on a microchip or that use two cassette tapes (one for outgoing messages and one for incoming messages) are better—callers have to wait until the tape is fast-forwarded to a blank space before leaving a message on a single-cassette system.

The PhoneMate 1850's outstanding performance and multitude of features make it well worth the street price of around $180.

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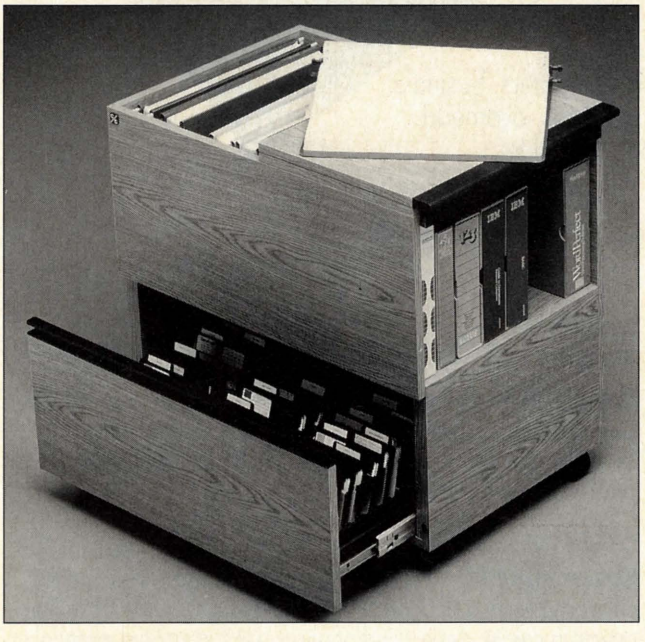

Clean Off Those Shelves. Store floppy disks, software manuals, and printouts in *Datamate 3000*. This rolling storage cabinet has three compartments for organizing and protecting your valuable computer materials. It's available in four laminate finishes. $239. From C & C Woodworking Company, Inc., 5 Gear Ave., North Lindenhurst, NY 11757; (516) 957-4700.

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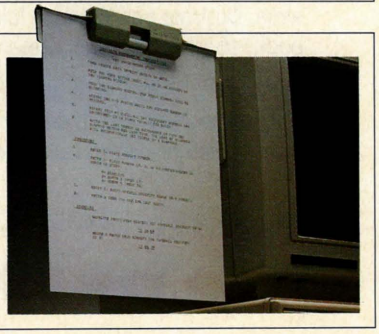

Clip Clears Copy Clutter. Free up desk space and make data entry easier with OfficeTech's *Copy Holder*. Mounts to monitor for right- or left-handed use. $7. From Hunt Manufacturing Co., 230 S. Broad St., Philadelphia, PA 19102-4167; (215) 732-7700.

Associate technical editor MARIE ALVICH-LOPINTO *is an office essential at* HOME-OFFICE COMPUTING.

See page 87 for product information.

Berlitz Announces A Breakthrough (Literally) in Self-Study Language Learning.

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Yes. Instead of visual cues, the Berlitz Think and Talk tapes use *sound effects* (a car starting, a door slamming, a clock striking, etc.) to "imprint" you with the meanings of the words and phrases you're hearing. You quickly form a "direct association" between the words that you hear and the objects they represent, without having to stop and translate into and out of English. Think and Talk blends these sound effects with audio cues and printed illustrations to make a unique language learning experience. It's a revolutionary approach to self-study.

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Good Software at Good Prices

From a Popular Integrated Package to Quick-and-Handy Numbers and Addresses To a Personal Office In a Box

Over the past five years, we've seen software publishers release more and more useful, low-cost programs. These packages help the average individual do productive work almost immediately, without the headaches of having to delve into complex, expensive software. Programs in the low-cost category (defined here as software with a street price of $100 or less) range from complete packages that combine several applications, such as Microsoft *Works*, to stand-alone packages for specific purposes, like *Better Working One-Person Office*. Both programs, along with cheap MS-DOS number crunchers and a fine Macintosh and MS-DOS electronic address book, are reviewed below. These reviews far from exhaust the growing low-cost category; you'll be reading more about good software at good prices in the months ahead.

An All-in-One Apex

Microsoft Works

Rating: ★ ★ ★ ★

AT A GLANCE: Combines word processor, database, spreadsheet, business graphs, and telecommunications in an almost-standard package.

DOCUMENTATION: Exemplary. Complete on-line tutorial teaches all program basics—no need to open a book. Includes extensive on-line help and a well-organized reference manual.

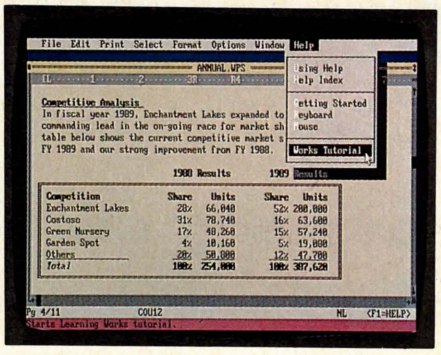
ERROR HANDLING: Consistently offers helpful on-screen messages to catch mistakes, although Undo is provided only in word processor.

EASE OF USE: Some functions remain complex (setting up charts and database reports, for example), but basics easily mastered.

SUPPORT: May have brief wait for phone support (not toll-free), but staff highly knowledgeable and courteous. Extensive support on CompuServe.

VERSION REVIEWED: 2.0

PRICE: $150



The Microsoft *Works* on-screen tutorial gets you up and running quickly. Here it shows how to include spreadsheet numbers in a word-processed document.

SYSTEM REQUIREMENTS: 384K IBM PC*, PS/2; two drives (hard-disk drive recommended); CGA, EGA, VGA, or Hercules; DOS 2.0 or higher; 5.25- and 3.5-inch. Also for 1MB Macintosh.

PUBLISHER: Microsoft Corporation, One Microsoft Way, Redmond, WA 98052-6399; (206) 882-8080

Say you bought a computer with basic business-management tasks in mind: writing letters, proposals, and reports; building a database of your customers and suppliers; keeping track of inventory; balancing the books; setting up a budget. How much would you have to spend on software to accomplish all these tasks?

If you started to answer that question by thinking of the top word-processing, spreadsheet, and database programs (all list-priced at around $500 each), think again. Think of $150—or about $100 if you buy from a discounter. What can you get for just $100? For many business owners, the answer is "all the power you'll ever need"—if you invest in a copy of Microsoft *Works*.

Microsoft *Works* combines four core computer applications: word processor, spreadsheet (with charts), database, and communications. The term commonly used for this kind of all-in-one approach to software is integrated. One of the most impressive aspects of *Works* is the degree to which the designers took the integrated concept to heart. Information can be passed back and forth effortlessly between applications. In this way, *Works* becomes much more than the sum of its parts—it encourages even novices to use the different special capabilities of the computer together. You could spend thousands of dollars on individual packages that would accomplish the tasks included here and still have very real difficulties sharing information between applications. With *Works*, it's second nature.

There are undeniable trade-offs when comparing the *Works* applications with full-featured programs in each specialty. The question is: Will the missing features affect your day-to-day business computing tasks? Let's go through each module to find out.

Word processor. Word processing is my bread-and-butter application, and I found *Works* perfectly adequate for most of my needs. Printer support is first-rate—*Works* makes it easy to use whatever font and spacing options my hardware provides.

Useful features abound. Pages can be numbered automatically, and I can include multiple-line headers and footers. Tabs are fully implemented—text can be lined up to the left or right of a tab stop, centered, or aligned to the decimal point in a dollar figure. I can even specify a tab-leader character (useful when typing a table of contents, for instance, with a line of dots between the listing and the page number).

Should I need to produce a form letter, I write the letter in the word processor and use the *Works* database to maintain the mailing list. The procedure for producing mailing labels is also easily mastered, and the program is capable of printing multiple columns of labels.

I can specify that a paragraph not be split between pages. Single or multiple paragraphs can also be enclosed in a box with a simple formatting command. The spelling checker is adequate, including the ability to add frequently used words to a personal dictionary. There's also a thesaurus, which, while not as extensive as those found in higher-end programs, is significantly better than no thesaurus at all. And the only limit to document length is the available space.

As in the other *Works* modules, plenty of features found in high-end programs are not found here. For example, I can't include graphics created with an illustration program, run text in multiple columns, or automatically generate an index and table of contents. I can create footnotes, and *Works* will automatically number them; but the text can only be placed at the end of the document. However, when it comes to basic business tasks, *Works* has the job covered.

Spreadsheet. This strong module delivers

See page 87 for product information.

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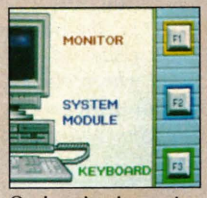

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a maximum size of 4,096 rows by 256 columns. That's limited when compared to high-end applications. But as a small-business user, I fervently pray I need never build a spreadsheet anywhere near that size.

I was impressed with the selection of built-in functions (shortcuts that accomplish common calculations without forcing you to build the formula yourself). There are more than 70 functions in all, including extensive financial, trigonometric, time/calendar, and automatic table lookup commands.

An extensive charting module lets me create a variety of bar, line, area, and pie charts based on spreadsheet data. The program, which supports color printers, includes a selection of good-looking typefaces specially designed for labeling charts. My only significant complaint here is that I cannot see the spreadsheet and its related chart on-screen at the same time.

Database. The *Works* database lets me jump easily among several views of my information. First I create a form to enter data, complete with labels for the on-screen blanks (field names) that I can print or not when the time comes. Data can also be displayed as a list, which works like a text-based spreadsheet. Each column is a separate field, each row a separate record. I found this view highly convenient to search, sort, and manipulate my data. I can also generate custom reports, including totals and subtotals by category. Since up to eight report formats can be saved with each database, it's easy to generate updated reports as information changes.

Finding database information is simple. Either I do a simple search (find all the Johnsons who placed orders or everyone who bought more than $25 worth of goods), or I compose elaborate queries that combine specifications for each field (find everyone who ordered cheddar or Gorgonzola during a specific three-month period who paid within 30 days and lives in New York or California).

The database's limitations will be unacceptable for some people. While there can be up to 256 fields in each record, which should be more than adequate, each field is limited to 256 characters, making long entries impossible. There's also an overall limit of 4,096 records per database. That may sound like a lot, but it can pose problems. Suppose, for example, you wanted to record orders received by a retail business in a *Works* database. If you're open six days a week and receive more than 13 orders a day, you'll run out of space before the year is up.

Communications, plus. Finally, the basic communications module will send and receive files via modem. I set up separate files—stored with communications settings and a procedure to log on automatically when connected—for each on-line service, bulletin board, and individual I deal with. XModem is the only file-transfer protocol (used to ensure accurate data transmission), but since XModem is a standard, that shouldn't bother most people.

As text scrolls off-screen, it's kept in a buffer that can hold up to 750 lines for later review. However, I missed an on-screen timer to indicate how long I had been connected (useful if I'm paying by the minute) and the ability to automatically redial repeatedly if the number is busy (as frequently occurs when I call private bulletin boards).

Additional *Works* goodies include an on-screen alarm clock that pops up at the times and dates I set and a utility that dials any on-screen phone number through the modem. The really valuable extra is a pop-up calculator that performs basic math functions and then pastes the result into whatever application I'm working in.

Tying it all together. Having picked apart the various modules that make up Microsoft *Works*, it's time to look at the program's most important feature—the way it ties together all its capabilities.

I can have up to eight files loaded into memory at once in any combination of modules that suits me. Jumping from application to application is as easy as jumping from file to file.

Each file can occupy the full screen, in which case I select the file I want from a menu. However, I can also keep a partial view of several files visible at once, each in its own window. I can size and move these windows manually, or I can choose the Arrange command and let *Works* create a screen layout showing a section of each file. Why bother with lots of little on-screen windows? Because I can zoom any window to full screen-size instantly, then zoom it back to its small size just as quickly.

The screen layout is similar in each module. A menu bar across the top of the screen shows category names—File, Edit, Print, and so forth. When I choose a category, a submenu drops down presenting all available actions. It's logical and easy to learn. While I have my choice of using keyboard commands or a mouse, I heartily recommend the mouse for speed and ease of use.

While moving from application to application instantly is important, copying information between applications is even more so. *Works* shines in this regard. Let's say I call an on-line service to check airline schedules and want to move the information into a word-processing document. No problem—I just highlight the schedules within the Communications module, choose Cut or Copy from the Edit menu, switch to a word-processing document, and Paste. I can also cut and paste information from the spreadsheet or database into the word processor—*Works* automatically organizes the data by inserting tabs between columns. Inserting a chart based on spreadsheet data in my word-processing document is equally simple, and I'm free to adjust the size and placement of the chart to suit the document's format.

Summary. Overall, each module is highly capable, and each has its limitations. Quality is not one of the limitations, though—each application works quickly, dependably, and well. If the specific missing features don't apply to your particular tasks, then you won't find *Works* limited at all. And if you have one area where you need more capable software but find the other three *Works* modules adequate, *Works* lets you run another application and automatically return to *Works* when you're done.

Works would deserve high praise if it simply provided a low-cost method to acquire reasonably powerful renditions of four core computer applications. By knitting these four modules together in an intuitive and elegant way, though, Microsoft offers a solution to a much bigger small-business challenge than simply finding affordable software. *Works* makes it easy to use all the information you feed into the computer together in a meaningful way—and isn't that really why you computerized your business in the first place?—STEVE MORGENSTERN

About Software Reviews

Our software reviews use shorthand to describe several of the details associated with any package. Hardware, software, and memory are required unless noted as "recommended" or "optional." When more than one computer is listed under "System Requirements," the machine marked with an asterisk (*) is the type on which the software was reviewed. Requirements are not listed where obvious (for instance, printers with word processors or modems with communications programs). For computer systems that can use both 5.25- and 3.5-inch disks (such as the IBM PC and PS/2), we've listed only those disk sizes that are either supplied with the software or available at no extra cost from the publisher.

Designation	Models
IBM PC, PS/2	PC/XT/AT, PS/2 and compatibles
512K Macintosh	512K/512Ke/Plus/SE/II series
512Ke Macintosh	512Ke/Plus/SE/II series
1MB Macintosh	Plus/SE/II series

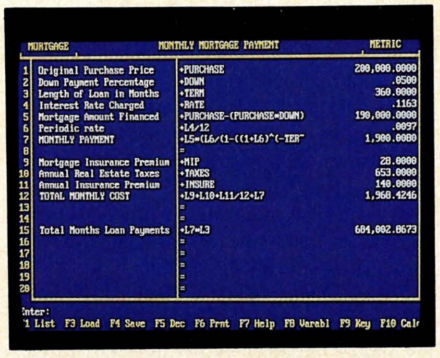
○	*Poor*	★★★	*Very Good*
★	*Fair*	★★★★	*Excellent*
★★	*Good*		

Budget-Priced Number Crunchers

As-Easy-As and *The UnSpreadsheet* are two low-budget productivity tools designed to perform a variety of calculations. In order to compare *As-Easy-As* and *The UnSpreadsheet* in terms of features and ease of use, I prepared a net-income worksheet, which included 18 expense categories from Schedule C. I wanted my summary worksheet to subtract monthly expense totals from monthly income totals, to give me a running picture of my accounts.

As-Easy-As. *As-Easy-As* performed all tasks well. A spreadsheet with many of the same capabilities found in the original Lotus *1-2-3*, *As-Easy-As* consists of a conventional rows-and-columns grid. Letters across the top label 256 columns; numbers down the left side mark 8,192 rows. Cells may contain text labels, numbers, or formulas.

I had no trouble navigating the *As-Easy-As* worksheet with the cursor keypad. Several keyboard commands, like Tab and End/Down, serve as convenient shortcuts. Pressing the slash key (/) calls up a menu of program options.



	MORTGAGE	MONTHLY MORTGAGE PAYMENT	METRIC
1	Original Purchase Price	+PURCHASE	200,000.0000
2	Down Payment Percentage	+DOWN	.0500
3	Length of Loan in Months	+TERM	360.0000
4	Interest Rate Charged	+RATE	.1163
5	Mortgage Amount Financed	+PURCHASE-(PURCHASE*DOWN)	190,000.0000
6	Periodic rate	+L4/12	.0097
7	MONTHLY PAYMENT	+L5*(L6/(1-(1+L6)^(-TER	1,900.0000
8		=	
9	Mortgage Insurance Premium	+MIP	20.0000
10	Annual Real Estate Taxes	+TAXES	653.0000
11	Annual Insurance Premium	+INSURE	140.0000
12	TOTAL MONTHLY COST	+L9+L10+L11/12+L7	1,368.4246
13		=	
14		=	
15	Total Months Loan Payments	+L7*L3	684,002.8673
16		=	
17		=	
18		=	
19		=	
20		=	

Enter:
1 List F3 Load F4 Save F5 Doc F6 Prnt F7 Help F8 Variabl F9 Key F10 Calc

***The UnSpreadsheet* limits mathematical analysis to three columns: comment, formula, and figures.**

Setting up a summary income-expense balance sheet does not involve complicated formulas or functions. With *As-Easy-As*, all I had to do was configure the worksheet with a column for each month and a row for every expense category. *As-Easy-As* had everything I needed, including the Sum function to total expenses within columns. I configured the worksheet with minimal effort, accessing the extensive on-line help and well-written manual whenever I needed assistance.

The UnSpreadsheet

Rating: ★ ★ ★

AT A GLANCE: The name's true—it's a handy three-column electronic calculator with plug-in business, financial, and scientific functions.
DOCUMENTATION: Easy to read, but a bit brief; needs more detailed tutorials. Useful on-line help.
ERROR HANDLING: Pressing wrong key easily corrected.
EASE OF USE: Simple structure makes it simple to get at answers.
SUPPORT: Good enough for program that barely needs support.

VERSION REVIEWED: 3.0

PRICE: $50

SYSTEM REQUIREMENTS: 192K IBM PC, PS/2; one drive; DOS 1.0 or higher

PUBLISHER: SimplSoft Products, Inc., P.O. Box 13173, Boulder, CO 80308; (303) 444-8771

I instructed the *As-Easy-As* worksheet to subtract total monthly expenses from monthly gross income using standard arithmetic operators such as *+B3-B34*. It was simple to adjust column widths and globally format cells to display figures as currency values with two decimal places. Entering a backslash character (\) directed the software to repeat the character that followed. So I

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quickly entered a line of equal signs to distinguish the income portion of the spreadsheet from the expense portion; and dashed lines to separate a column of numbers from a column total.

As-Easy-As let me copy from a single cell relative to a range of cells. In other words, I had to figure the formula for a monthly expense total only once. With the relative cell reference feature, I could copy the formula for the January expense total to appropriate cells in the February through December columns. This feature also proved useful for calculating monthly net incomes. When I called the publisher's technical support (the phone number is not toll-free) for assistance with the relative copy command, the technician was knowledgeable, courteous, and very helpful.

As-Easy-As performed recalculations quickly. The program also has a linking feature that let me tie the contents of a cell on my summary worksheet to a cell in another file. Instead of using a calculator to total expenses item by item (leaving many opportunities for error), I constructed individual monthly worksheets that totaled expenses for me. Then I instructed the summary worksheet to get category totals from the appropriate monthly worksheet. *As-Easy-As* updates all linked cells on the Schedule C summary worksheet whenever I call it into memory.

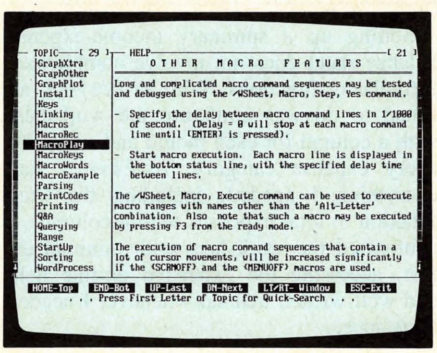
The UnSpreadsheet. As its name implies, this is not a typical spreadsheet. Rather, it's a handy electronic calculator with more than 100 built-in template applications for a variety of business, financial, math, real estate, personal, and home-office calculations. So if you're looking for an inexpensive but conventional number-cruncher with lots of rows and columns, stay with *As-Easy-As*. But if *The UnSpreadsheet* templates answer your needs for numeric analysis, you might appreciate its limitations.

An *UnSpreadsheet* worksheet restricts you to 20 rows and three columns. Column one contains formulas or labels, column two presents calculation results, and column three holds either labels or formulas. You type in commands and data on the Enter line at the bottom of the screen. The program transfers data to the worksheet and performs all calculations. The 20-row workspace restriction makes it possible to view all cells at one glance, without scrolling.

I used the balance-sheet template to calculate net worth. To see whether I could afford a new computer, I accessed the depreciation template for a quick calculation of ACRS depreciation (ACRS rates for three, five, and seven years are provided). Statement and invoice templates make it easy to bill clients or send them monthly account summaries.

The UnSpreadsheet's three-column limitation prevented me from setting up a profit/loss summary listing all monthly totals on a single worksheet. I had to construct individual monthly income/expense summaries. I got around the 20-row computational limit by using the chain command to connect two worksheets. Chaining let me carry over values as well as formulas. However, the manual was not very helpful. I had to puzzle out the chain command by working through some sample disk files.

The UnSpreadsheet's financial applications include templates for calculating simple and compound interest, foreign currency conversions, monthly payments on an installment loan, internal rate of return, and more. There's a template for keeping a checkbook, but it's better for personal than business use. When you run out of room on the check register, simply carry the balance forward to a new page.



Complete, context-sensitive help screens help make *As-Easy-As* one of the better spreadsheet values.

As-Easy-As

Rating: ★ ★ ★

AT A GLANCE: Standard spreadsheet with surprisingly extensive features for such a low price.
DOCUMENTATION: Well written, with clear examples and good organization.
ERROR HANDLING: No problems to speak of.
EASE OF USE: The name's true—it's as easy as *1-2-3*.
SUPPORT: Knowledgeable, courteous, helpful.
VERSION REVIEWED: 4.0
PRICE: $50
SYSTEM REQUIREMENTS: 384K IBM PC, PS/2; one drive; DOS 2.11 or higher
PUBLISHER: Trius, Inc., 231 Sutton St., Suite 2D-3, P.O. Box 249, North Andover, MA 01845; (508) 794-9377

Editing an *UnSpreadsheet* template is a breeze. The F9 key toggles a help line that shows application commands and serves as a convenient reference guide. Single-letter keyboard commands let me change a template's title, insert or delete lines, or modify a formula.

On-line help summarizes how to create a worksheet and provides assistance with program commands and variables. *The UnSpreadsheet*'s manual is easy to read, but a bit brief. I would have preferred more detailed tutorials for working with the electronic templates.

The bottom line. If you need to manipulate numerical data for reports, budget projections, or financial calculations, but spreadsheet heavyweights like Lotus *1-2-3*, *Excel*, *Quattro Pro*, or *SuperCalc 5* pack more muscle than you care to carry, try *As-Easy-As*. An evaluation disk costs only $6 ($7 for the 3.5-inch version). It may be the perfect number cruncher to keep your office accounts in line.

Don't let *As-Easy-As*'s bottom-dollar price tag fool you into thinking the product is short on features. This program delivers value with alphabetical and numerical sorts on rows and timesaving macros. It also lets you graphically illustrate numerical data with 10 different charts and up to six curves per graph.

On the other hand, if you merely wish to turn your computer into a sophisticated but simple-to-use calculator, let *The UnSpreadsheet* crunch your numbers with its built-in and customizable functions. *The UnSpreadsheet* calculates quickly, requires minimal learning time, and performs a wide range of operations suitable for almost any office.

The UnSpreadsheet's abbreviated workspace does not mean there's no place for this application on home-office desktops. Templates handle a variety of day-to-day, what-if calculations. Just remember, *The UnSpreadsheet* performs best as a calculator, not as a spreadsheet.

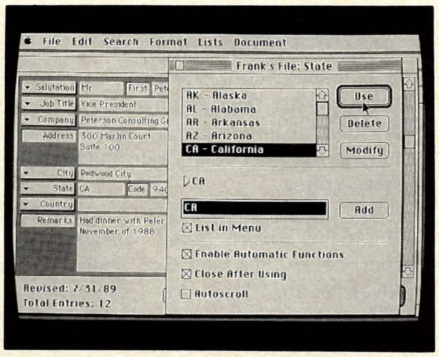
—CAROL S. HOLZBERG

Make Your Own Black Book

Address Book Plus is a database program preset to hold names, addresses, phone numbers, and other information about the people you know. That's about all I've ever wanted from a database, so the program's concept appeals to me. And if you want to track something other than names and addresses—such as project completion dates—8 of the 18 fields can be changed to suit your needs. In both regards, *Plus* is a quick and easy-to-use database for most basic filing needs.

When entering data, you mark each name as Personal or Business Contact, so you can separate them later. And you can later sort entries by Name, Company, or Profession.

The real strength of *Plus*, however, is that you can view and print any file in five preset formats: as address-book pages, rotary-file cards, mailing labels, phone lists, or envelopes. The publisher provides sample ad-



Pop-up, point-and-choose menus make it easy to find information using *Address Book Plus*.

dress-book pages to get you started, and also sells all forms in both tractor-feed or single-sheet versions. Converting a file—say, Business Contacts—to a new format requires no more effort than opening a pull-down menu and clicking on the format of choice. When I convert a file to address-book format, for instance, I see on-screen exactly what the printout will look like.

I had some trouble aligning the address-book paper in the printer, which is to be expected. Printing anything besides a standard 8.5-by-11-inch piece of paper is not a reflex action for most people. I also struggled to print an envelope properly. The documentation, which had hitherto fully answered all my questions, let me down on the printing problems. But after some swearing and the destruction of a few trees, my new address book emerged.

For $50 more than the software alone, the Senior edition of *Address Book Plus* comes with 50 pages of address paper and a binder (the MS-DOS version offers more for the same extra $50: 100 sheets of address paper, 100 Rolodex-style cards, 200 pin-feed mailing labels, three spiral binders to hold the pages together, and a black leather case to hold the pages). The overall effect is of a homemade address book, though it's not the kind of thing you'd want to pull out from a black attaché case. The virtue, of course, is that you can remake the book whenever you need to add, subtract, or modify entries.

I didn't print labels or rotary-file cards, but I imagine they would end up looking more professional, since what messes up the address book is pushing the spiral through little holes. It's somewhat like taking a physical I.Q. test. I think you'd be better off just stapling the pages together. The other odd thing is that only one side of each page is printed on; in a handwritten address book, of course, you'd fill in both sides; perhaps I can use the blank pages for notes.

Despite the problems I had printing, I still think *Address Book Plus* is a good program.

Address Book Plus

Rating: ★ ★ ★

AT A GLANCE: Extremely capable contact and mailing-list manager, complete with phone-dialer, that prints variety of forms.
DOCUMENTATION: Well written, easy to follow, but thin on the all-important printing function.
ERROR HANDLING: Good, no real problems.
EASE OF USE: Breeze to use—except getting forms to print correctly takes trial and error.
SUPPORT: Useful as needed.

VERSION REVIEWED: 1.0

PRICE: $70 (IBM); $80 (Mac)

SYSTEM REQUIREMENTS: 1MB Macintosh*; two drives; ImageWriter, LaserWriter, or compatible printer; System 6.0 or higher. Also for 384K IBM PC, PS/2; two drives; DOS 2.0 or higher; 5.25- or 3.5-inch.

PUBLISHER: Power Up Software Corp., P.O. Box 7600, San Mateo, CA 94403; (415) 345-9381

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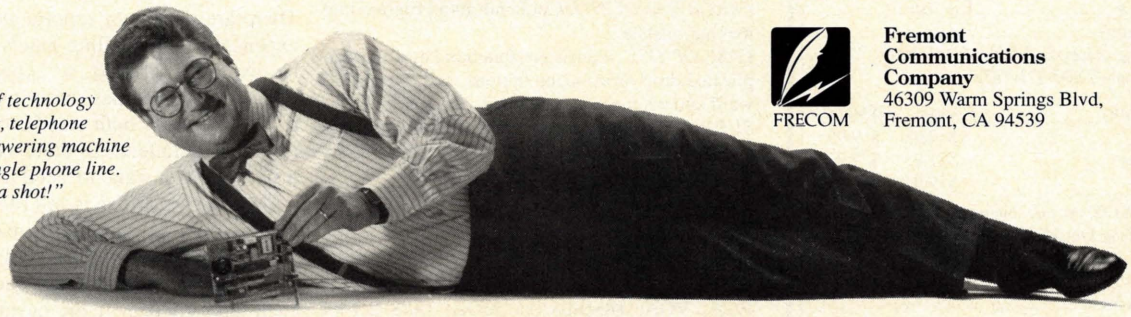

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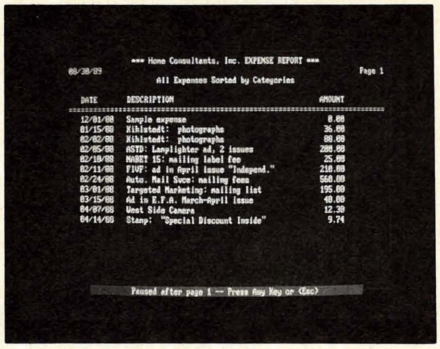
That's because I've had more trouble with other database programs. Here, at least, the formatting is done for me; all I have to do is align the paper properly. As an electronic Rolodex, the program is superb. I quickly find the people I want and dial their phone numbers. I can't take notes on the call, so the program is not to be used as a full-fledged phone management program.

However, if you need a program for your contact list, and especially if you use a database but find it complex, *Address Book Plus* could easily fill your needs at a good price.

—NICK SULLIVAN

Intuitively Record Expenses, Generate Invoices, Save Time



***One-Person Office*'s predesigned reports, such as the one shown here, let a small business track income and expenses.**

Better Working One-Person Office

Rating: ★ ★ ★

AT A GLANCE: Dedicated database-style application makes it easy to record and bill expenses and track payments. Includes very good contact manager with mail merge.

DOCUMENTATION: Excellent—part tutorial and part reference guide—it anticipated my questions. Help screens serve as good reminders.

ERROR HANDLING: Could not fool program into making mistakes.

EASE OF USE: Consistent function keys, uncomplicated drop-down menu options, and straightforward options make software easy to learn and use.

SUPPORT: Needing support with software this simple is unlikely, but I got a busy signal for six days at different times—not reassuring.

VERSION REVIEWED: 1.0

PRICE: $70

SYSTEM REQUIREMENTS: 512K IBM PC, PS/2; two drives (hard-disk drive recommended); CGA, EGA, VGA, Hercules, or MDA; DOS 2.1 or higher; 5.25- and 3.5-inch

PUBLISHER: Spinnaker Software, 201 Broadway, Cambridge, MA 02139-1901; (617) 494-1200

As the owner of a small, one-person company, I regularly perform two time-consuming tasks by hand: record expenses and generate invoices for my time and expenses. I have never found a simple invoice generator that would include both hourly rate and itemized expense billing.

When I read the features list (a long list at that) on the box of *Better Working One-Person Office*, the software sounded too good to be true. Here was a package that would create statements easily—I would not need to set up a chart of accounts or deal with debits and credits.

One-Person Office does, indeed, make it easy to record and bill expenses and track payments. In addition to handling these chores, *One-Person Office* includes a good contact manager with mail merge. The program's functions are all menu driven and well integrated.

The best part about *One-Person Office* is that it lets me work according to my own habits. For example, with some packages I would have to enter all company information in the database before I could enter an invoice for that company. Then I might have to remember that company's code. Not so with *One-Person Office*. From the invoice screen I enter the first few letters of the company name, press a key, and choose from a list of companies with names that match the first few characters entered. If the company I want to invoice isn't listed because I haven't set it up yet, I can add it immediately.

The basic unit for expense tracking and billing is a job. I create expense records (for travel, supplies, or parts, for example) and tie them to a job if I want to include them on an invoice. If, for income-tax purposes, I only want to keep track of expenses I incur but do not bill, such as auto repair and gas, I simply leave the job code blank. This is typical of the simple logic throughout the program: If you enter data, it will or can be used; if you omit it, the program doesn't quibble.

Expense reports group charges by category and subcategory, in detail or summary. There are dozens of reports available, from expense lists to mailing labels. Reports can be displayed, printed, or exported to a file. The program comes with two predefined invoice layouts; both can be modified. One format is detailed; the other is more appropriate when I want to send a summary.

One-Person Office is full of such timesaving features as automatic invoice numbering. Once I enter the first invoice number, the program will increase the number for each new invoice. If my customer uses one check to pay multiple invoices, *One-Person Office* can split the payment. It keeps track of sales-tax rates as well as tax collections and lets me define what is and isn't taxable.

The data is well integrated among modules. For example, the contact manager uses the names and addresses of companies I invoice. Besides the standard name, title, and address, the contact manager lets me assign up to 10 one-character codes to each contact, then select and exclude records based on any single code. For instance, I used C for clients interested in customized programming, T for clients who need training, and so on. To send follow-up letters to all customers who may need training, I pick only those records with a T.

I was able to transfer my current client list in *dBase* format into *One-Person Office* using the import option. With unlimited free-form notes, customized labels, and reports, the contact manager can easily replace your file of business or index cards.

The documentation is part tutorial and part reference guide. It anticipated many of my questions: What if I don't know the code? Can I sort the records? Can I select expenses? The documentation uses sufficient detail and plenty of examples.

Consistent function keys for all tasks (invoicing, entering expenses, updating client lists), and simple, straightforward options make the program easy to learn and use. The program uses uncomplicated drop-down menu options to find the right screens, and function keys do the work (save data or add an invoice, for example).

Although the invoice format can be easily edited and customized, I decided to try my hand at editing without reading the directions. When I finally realized that I had created a monster, I called technical support to see if I could restore the default layout.

I tried unsuccessfully for six days (at a variety of times) to reach Spinnaker. All I received was a busy signal. When I finally got through, the representative told me that the product was so new she wasn't trained to answer my question, but did get the answer from the product manager.

One-Person Office does have some curious omissions. There is no report that lists both invoice amount and payments received together (you can have one or the other, but not both). When entering receivables, a screen showing open invoices by date is provided; one by company would be helpful, especially when I divide payments among invoices. You can export expenses or payments to a spreadsheet, but you have to use an ASCII file or the *Better Working Eight-in-One* spreadsheet, not *1-2-3*'s standard WKS or WK1 format.

These oversights aside, *One-Person Office* offers great flexibility and a short learning curve. Everything works as I would expect or hope for. If ever a program was intuitive and easy to use, this is the one.

—JIM POWELL

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IBM

1. Windows 3.0 *Microsoft Corp.*	**1.** Quicken v3.0 *Intuit, Inc.*	**1.** Mavis Beacon Teaches Typing *The Software Toolworks/EA*	**1.** Trivial Pursuit *Parker Brothers*
2. WordPerfect v5.1 *WordPerfect Corp.*	**2.** The New Print Shop *Broderbund Software*	**2.** Dvorak Crash Course *Scandinavian*	**2.** SimCity *Maxis Software/Broderbund*
3. Grammatik IV *Reference Software*	**3.** Calendar Creator Plus *Power Up! Software*	**3.** Learning DOS v2.0 *Microsoft Corp.*	**3.** Flight Simulator v4.0 *Microsoft Corp.*
4. Works v2.0 *Microsoft Corp.*	**4.** PC Globe v3.0 *PC Globe, Inc.*	**4.** Playroom *Broderbund Software*	**4.** 688 Attack Sub *Electronic Arts*
5. Express Publisher v1.1 *Power Up! Software*	**5.** PC USA *PC Globe, Inc.*	**5.** Outnumbered *The Learning Company*	**5.** Ultima VI *Origin Systems*
6. Lotus 1-2-3 v2.2 *Lotus Development Corp.*	**6.** Managing Your Money v6.0 *MECA*	**6.** Where in Time Is Carmen Sandiego? *Broderbund Software*	**6.** Wolf Pack *Broderbund Software*
7. Windows/286 2.x *Microsoft Corp.*	**7.** Resume Maker *Individual*	**7.** Reader Rabbit *The Learning Company*	**7.** Tetris *Spectrum HoloByte*
8. First Publisher v3.0 *Software Publishing Corp.*	**8.** Family Tree Maker *Banner Blue*	**8.** Math Blaster Plus *Davidson & Associates*	**8.** Conquests of Camelot *Sierra On-Line*
9. MyAdvancedMailList *MySoftware Company*	**9.** Top Priority *Power Up! Software*	**9.** Where in the World . . . *Broderbund Software*	**9.** Casino Gambling *Intracorp*
10. Business Application Template *Lotus Development Corp.*	**10.** Softtype *Mediagenic*	**10.** Where in the USA . . . *Broderbund Software*	**10.** Leisure Suit Larry III *Sierra On-Line*

MACINTOSH

1. Grammatik Mac *Reference Software*	**1.** Quicken v1.5 *Intuit, Inc.*	**1.** Mavis Beacon Teaches Typing *The Software Toolworks/EA*	**1.** SimCity *Maxis Software/Broderbund*
2. MyAdvancedMailList *MySoftware Company*	**2.** Publish-It! Easy *TimeWorks, Inc.*	**2.** Where in the World . . . *Broderbund Software*	**2.** Falcon v2.0 *Spectrum HoloByte*
3. Word v4.0 *Microsoft Corp.*	**3.** The Print Shop *Broderbund Software*	**3.** Math Blaster *Davidson & Associates*	**3.** Welltris *Spectrum HoloByte*
4. Works v2.0 *Microsoft Corp.*	**4.** MyAdvancedLabelMaker *MySofware Company*	**4.** Reader Rabbit Mac *The Learning Company*	**4.** Shanghai *Mediagenic*
5. Excel v2.2 *Microsoft Corp.*	**5.** Address Book Plus *Power Up! Software*	**5.** Manhole *Mediagenic*	**5.** Flight Simulator v1.02 *Microsoft Corp.*
6. MacWrite II *Claris Corp.*	**6.** Calendar Creator v1.0 *Power Up! Software*	**6.** Where in the USA . . . *Broderbund Software*	**6.** Duel: Test Drive II *Accolade*
7. DiskLock *Fifth Generation*	**7.** Synchronicity v1.0 *Visionary Software/Macamerica*	**7.** Number Maze *Great Wave*	**7.** Pipe Dream *Electronic Arts*
8. Simply Accounting v1.03 *Computer Associates*	**8.** Resume Kit *Spinnaker*	**8.** Typing Instructor Encore *Individual*	**8.** Playroom *Broderbund Software*
9. PageMaker v3.0 *Aldus*	**9.** Will Maker v3.0 *Nolo Press*	**9.** Math Blaster Mystery *Davidson*	**9.** Life & Death *Software Toolworks*
10. WriteNow v2.2 *T/Maker*	**10.** Managing Your Money v3.0 *MECA*	**10.** Computer SAT Preparation *Intera Learning Systems*	**10.** Tetris *Spectrum HoloByte*

APPLE

1. AppleWorks v3.0 *Claris Corp.*	**1.** The Print Shop w/Graphics Library *Broderbund Software*	**1.** Where in Time . . . *Broderbund Software*	**1.** Clue *Virgin Mastertronic*
2. AppleWorks GS v1.1 *Claris Corp.*	**2.** Quicken *Intuit, Inc.*	**2.** Children's Writing & Publishing *The Learning Company*	**2.** Tetris *Spectrum HoloByte*
3. WordPerfect v2.1 *WordPerfect Corp.*	**3.** Bank Street Writer Plus *Broderbund Software*	**3.** Where in the World . . . *Broderbund Software*	**3.** The Last Ninja *Mediagenic*
4. WordPerfect v1.1 *WordPerfect Corp.*	**4.** Print Shop Graphics Library *Broderbund Software*	**4.** Mavis Beacon Teaches Typing *The Software Toolworks/EA*	**4.** Hardball *Accolade*
5. GEOS v2.1 *Berkeley Software*	**5.** Publish-It! 3 *Timeworks, Inc.*	**5.** Math Blaster Plus *Davidson & Associates*	**5.** Playroom *Broderbund Software*
6. Graph-It! *Timeworks, Inc.*	**6.** MyMailList *MySoftware Company*	**6.** Think Quick! *The Learning Company*	**6.** Task Force *Britannica*
7. GS File *Brown Waugh*	**7.** Calendar Crafter *MECC*	**7.** The Oregon Trail *MECC*	**7.** Hunt For Red October *Datasoft*
8. Publish-It! 3 *Timeworks, Inc.*	**8.** Deluxe Write/Deluxe Paint *Electronic Arts*	**8.** Where in the USA . . . *Broderbund Software*	**8.** The Duel: Test Drive II *Accolade*
9. Swiftax *Timeworks, Inc.*	**9.** MyLabelMaker *MySoftware Company*	**9.** Math Rabbit *The Learning Company*	**9.** Bubble Bobble *Taito*
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- ☐ **Stock Charting** (1612) A complete stock charting and analysis package.
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- 3 **PC-Write 3.03** (1851–1853) The BEST word processor for under $200! Complete w/spell checking. (3 disks) 512K
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- 2 **ClipArt** (1875,1876) A huge collection of art/graphics for *Word Perfect 5.0+*.
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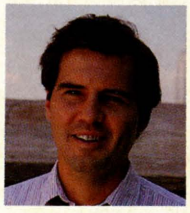
The Worst Things About Working from Home

BY NICK SULLIVAN



People may think that working at home, hundreds of miles from my employer's office, is tantamount to highway robbery—but I can rattle off a bunch of problems that stand between nirvana and me. Want to hear them?

The House as Pigpen. The biggest problem by far is keeping the house clean. Since my wife and I make our home in a restored barn, we don't have many interior walls. And despite thousands of square feet, we also don't have enough storage space. Lack of closets, combined with open spaces, two home offices, and two small children, means that clutter can build up faster than steam in a pressure cooker. Just keeping a lid on the clutter is a part-time job.

Trash. When my wife and I remodeled our kitchen a few years ago, the designer suggested we get a trash compactor. "If you both work at home, you've got trash from two offices plus all the regular garbage." At the time, we thought he was trying to sell us an unnecessary appliance, so the wisdom and inarguable logic of his words were lost on us. We didn't get a compactor, which compresses several wastebaskets of junk into inches. Instead, we lug bag after bag of garbage down to the basement every day. Remember the paperless office? Wasn't that a nifty idea?

The Muttering Spouse. My friend the curmudgeon was here last weekend, making all kinds of derisive comments about my messy abode and working conditions. His unending negativism was somewhat annoying, but it was a refreshing change from those who tell me I've got it made. "If my wife and I both worked from home we'd kill each other," he said over his second cup of coffee one morning.

I told him there was no chance of that happening to my lovely and me—but I have to admit that he does have a point. There are days when I'd like my wife to vacate the premises, or at least not point out that the floor needs washing and the laundry needs folding. It makes me remember how nice it was to go away for the day and come home at dinnertime to exchange stories with the family.

The phone bills are as regular and relentless as pounding waves.

The Peanut-Butter Syndrome. As I mentioned a couple of months ago (*Workstyles, July 1990*), man can live for awhile on peanut butter and Spaghetti-O's, but it's not guaranteed to be a rewarding life. The lack of enticing comestibles in the kitchen cabinets is not an unsolvable problem, but it takes so much energy to continually shop and cook that I occasionally start flapping around the house like a fish out of water.

Just as part of the trash problem could be solved with a trash compactor and part of the mess problem could be solved with more frequent cleaning service, part of the cuisine problem could be solved with a microwave oven. You've probably read about us elsewhere: the only family in America without a microwave. But since we live in New England, we feel, like Puritans, that throwing money at problems is not the way to go. Instead we think that suffering through problems with a vague sense of self-sufficiency is the superior way to live. Besides, what's the point of working from home if you have to spend thousands on life-support systems?

Massive Phone Bills. Since both my wife and I use a modem and a fax and make regular voice calls five days a week—and maintain three phone numbers (two in New England and one in New York)—we run up ugly phone bills. Some months they top $300. Even though I get reimbursed for as much as half the total bill, shelling out that much every month takes a tuck out of the checkbook. If I go for several months without filing expenses, my cash flow dries up.

Like the messy house and the need for food, the phone bills are as regular and relentless as pounding waves. No sooner do I clean up my accounts and pay my bills than three more phone bills wash ashore. I start to stagger payments, then I wait until I get disconnect notices. I resist paying until the last moment. I hate phone bills.

Lack of a Copier. When I first got a fax machine I thought I was killing two birds with one stone. I could use its copying function in lieu of a photocopier. I can—but it produces second-rate copies with the half-life of a mosquito. To copy a page from a magazine or book, as I often want to do, I have to rip the page from the publication, which I rarely want to do. If I have a lot of copies to make, I go out to a nearby library or print shop, which takes time. And sometimes I send off the original and do without my own copy.

I don't really need a copier, nor do I really need a laser printer. My work doesn't suffer much without them. But I use them when I go to the magazine's main office, so I want them in my home office.

I don't want to go into all this every time some starry-eyed optimist says I've got it made, because the benefits of my situation far outweigh the drawbacks. And I don't like to complain. But I just want you to know that my life's not a beach. At least, not a clean, sandy beach. ■

NICK SULLIVAN *is a senior editor who telecommutes to* HOME-OFFICE COMPUTING*'s New York office from his home in Massachusetts.*

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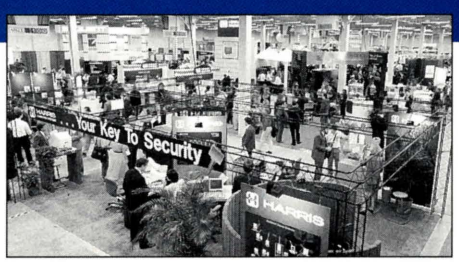

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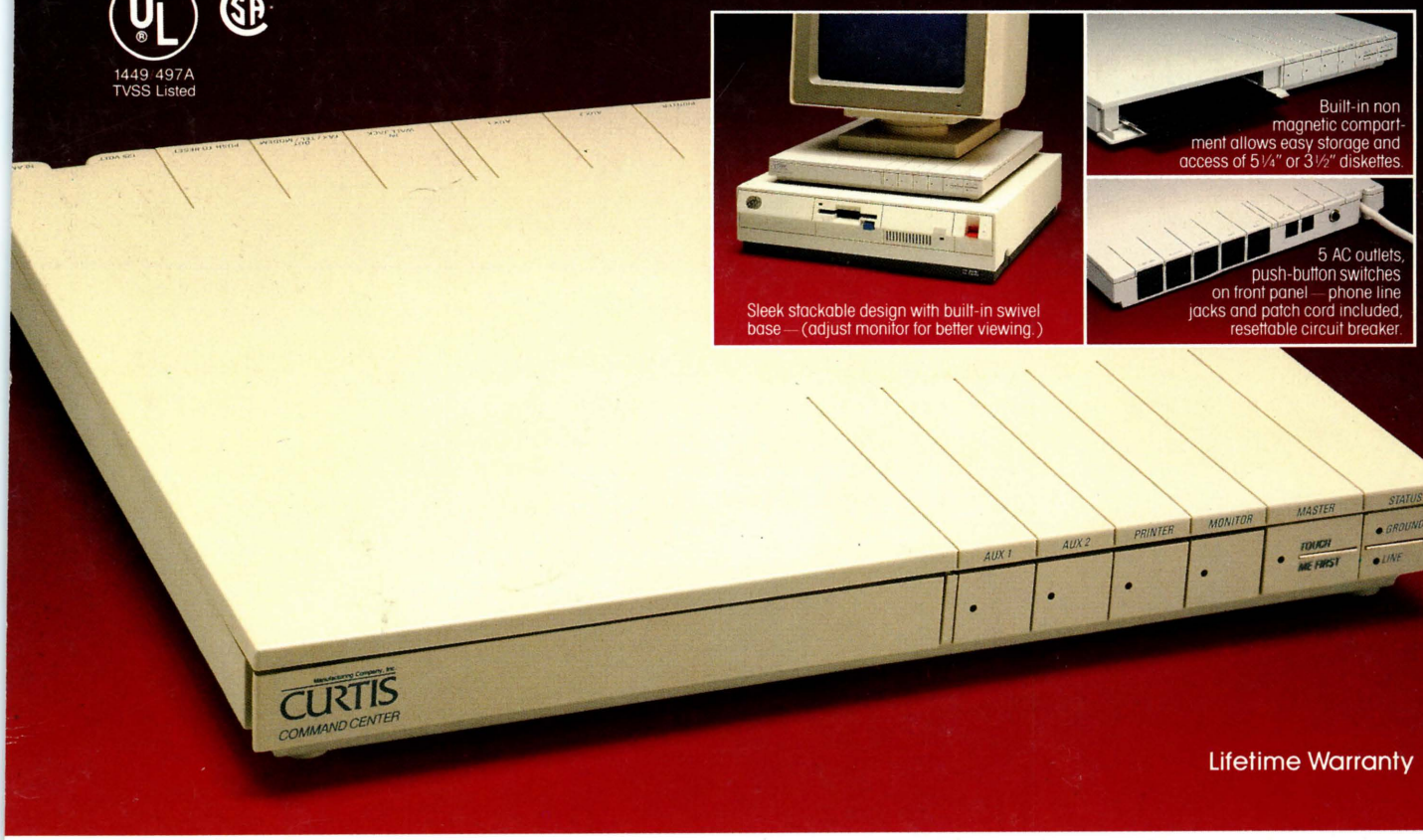

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